ORDER NO. TSD-7905-248

Service Manual

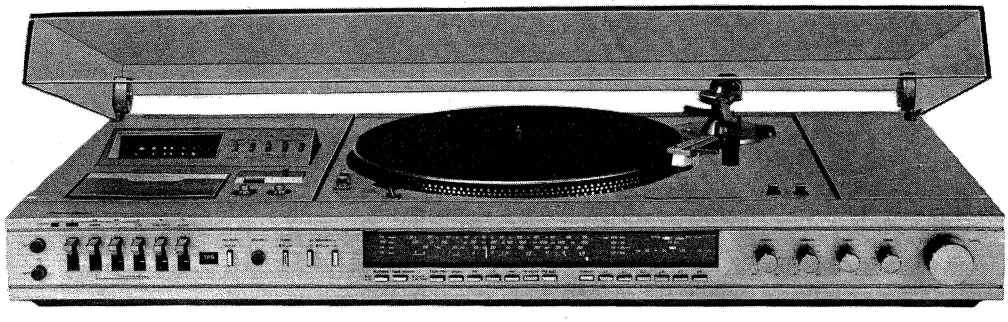
FM/MW/LW/SW/FM STEREO RADIO WITH FM PRESET TUNING SYSTEM, CASSETTE TAPE DECK AND RECORD PLAYER

Stereo Music Centre

SG-5000/(UK)

DOLBY SYSTEM

DOLBY SYSTEM



* "Dolby" and the double-D symbol are trade marks of Dolby Laboratories.
* Noise reduction system manufactured under license from Dolby Laboratories.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

SG-5000/(UK)

SG-5000/(UK)

Specifications

For United Kingdom

AMPLIFIER SECTION

Power Output	MPO 42W × 2 (THD 1%, 4Ω) RMS 32W × 2 (THD 1%, 4Ω) One Channel Driven RMS 25W × 2 (THD 1%, 4Ω) Both Channel Driven
Frequency Response	10 Hz ~ 40 kHz, ±1.5 dB (DIN)
Power Band Width	10 Hz ~ 25 kHz, −3 dB (DIN)
Input Sensitivity and Impedance:	
Mic.	1 mV, 3kΩ
Ext. Tape	150 mV, 47kΩ
Rec Out and Impedance	40 mV, 82kΩ
Tone Controls:	
Bass	±15 dB at 50 Hz
Treble	±15 dB at 15 kHz
Loudness Control	+10 dB at 50 Hz (Volume at −30 dB position)

FM TUNER SECTION

Tuning System	Varactor Diode (6 pre-selectors and 1 manual tuning)
Frequency Range	87.5 ~ 108 MHz
Intermediate Frequency (IF)	10.7 MHz
Sensitivity	2.0 μV (S/N 26 dB Mod, 40 kHz) (DIN) 2.0 μV (IHF)
Image	45 dB (98 MHz)
Signal/Noise Ratio	65 dB (at 1 kHz, 60 dB, 40 kHz)
Distortion:	
Mono	0.15% (at 1 kHz, 60 dB, 40 kHz)
Stereo	0.3% (at 1 kHz, 60 dB, 40 kHz)
Stereo Separation	45 dB (at 1 kHz, 60 dB, 30%) 35 dB (at 250 Hz ~ 6.3 kHz, 60 dB, 40 kHz) (DIN) 33 dB (at 6.3 ~ 10 kHz, 60 dB, 40 kHz) (DIN)
Selectivity	60 dB (at 1 kHz, 60 dB, 40 kHz)

AM TUNER SECTION

Frequency Range	MW: 525 ~ 1605 kHz (572 ~ 187m) LW: 145 ~ 350 kHz (2070 ~ 857m) SW: 5.9 ~ 18 MHz (50.8 ~ 16.7m)
Intermediate Frequency (IF)	470 kHz
Sensitivity	MW: 100 μV/m (1 MHz) LW: 200 μV/m (240 kHz) SW: 10 μV (12 MHz)
Image Ratio	MW: 50 dB (1 MHz) LW: 40 dB (240 kHz) SW: 17 dB (12 MHz)

RECORD PLAYER SECTION

Player System	Direct-Drive, Automatic Return
Turntable	30 cm (12")
Turntable Speeds	33-1/3 and 45 rpm, 2-speed with pitch controls and storobo-scope
Wow and Flutter	0.08% (WRMS), ±0.1% (DIN WTD)
Phonomotor	Frequency Generated Servo DC Motor
Cartridge	Moving Magnet Type (EPC-270C-X)
Stylus	Diamond (EPS-270SD)
Stylus Pressure	1.5 ~ 2.0g
Frequency Response	20 Hz ~ 20 kHz (DIN)
Separation	23 dB (DIN)
Signal/Noise Ratio	65 dB (DIN-B)

TAPE DECK SECTION

Deck System	Full-Auto-Stop Cassette System, Tape Programme Sensor
Track System	4-Track, 2-Channel
Recording System	AC Bias (50 kHz) with Dolby NR System
Erasing System	AC Erase (50 kHz)
Tape Speed	4.75 cm/sec. (1-7/8 i.p.s.)
Frequency Response	20 Hz ~ 15 kHz (Normal) 20 Hz ~ 16 kHz (Fe-Cr) 20 Hz ~ 16 kHz (CrO_2)
Signal/Noise Ratio:	
Dolby NR—Out	DIN: 53 dB (normal) 55 dB (Fe-Cr) 55 dB (CrO_2)
Dolby NR—In	10 dB or more improved at more than 5 kHz (DIN): 60 dB (Normal) 63 dB (Fe-Cr) 63 dB (CrO_2)
Erase Ratio	70 dB (DIN)
Channel Separation	40 dB (DIN)
Crosstalk	60 dB (DIN)
Wow and Flutter	0.1% (WRMS), ±2% (DIN)

POWER CONSUMPTION 220W

POWER SUPPLY ..... AC 110V, 120V, 220V, 240V, 50/60 Hz

DIMENSIONS (W × H × D) ..... 800 mm × 144 mm × 443 mm

WEIGHT ..... 14.9 kg

* Specifications are subject to change without notice for further improvement.

ENGLISH

Specifications

AMPLIFIER SECTION

Power Output	MPO 42W × 2 (THD 1%, 4Ω) RMS 32W × 2 (THD 1%, 4Ω) One Channel Driven RMS 25W × 2 (THD 1%, 4Ω) Both Channel Driven
Frequency Response	10 Hz ~ 40 kHz, ±1.5 dB (DIN)
Power Band Width	10 Hz ~ 25 kHz, −3 dB (DIN)
Input Sensitivity and Impedance:	
Mic.	1 mV, 3kΩ
Ext. Tape	150 mV, 47kΩ
Rec Out and Impedance	40 mV, 82kΩ
Tone Controls:	
Bass	±15 dB at 50 Hz
Treble	±15 dB at 15 kHz
Loudness Control	+10 dB at 50 Hz (Volume at −30 dB position)

FM TUNER SECTION

Tuning System	Varactor Diode (6 pre-selectors and 1 manual tuning)
Frequency Range	87.5 ~ 108 MHz
Intermediate Frequency (IF)	10.7 MHz
Sensitivity	2.0 μV (S/N 26 dB Mod, 40 kHz) (DIN) 2.0 μV (IHF)
Image	45 dB (98 MHz)
Signal/Noise Ratio	65 dB (at 1 kHz, 60 dB, 40 kHz)
Distortion:	
Mono	0.15% (at 1 kHz, 60 dB, 40 kHz)
Stereo	0.3% (at 1 kHz, 60 dB, 40 kHz)
Stereo Separation	45 dB (at 1 kHz, 60 dB, 30%) 35 dB (at 250 Hz ~ 6.3 kHz, 60 dB, 40 kHz) (DIN) 33 dB (at 6.3 ~ 10 kHz, 60 dB, 40 kHz) (DIN)
Selectivity	60 dB (at 1 kHz, 60 dB, 40 kHz)

AM TUNER SECTION

Frequency Range	MW: 525 ~ 1605 kHz (572 ~ 187m) LW: 145 ~ 350 kHz (2070 ~ 857m) SW: 5.9 ~ 18 MHz (50.8 ~ 16.7m)
Intermediate Frequency (IF)	455 kHz
Sensitivity	MW: 100 μV/m (1 MHz) LW: 200 μV/m (240 kHz) SW: 10 μV (12 MHz)
Image Ratio	MW: 50 dB (1 MHz) LW: 40 dB (240 kHz) SW: 17 dB (12 MHz)

RECORD PLAYER SECTION

Player System	Direct-Drive, Automatic Return
Turntable	30 cm (12")
Turntable Speeds	33-1/3 and 45 rpm, 2-speed with pitch controls and storobo-scope
Wow and Flutter	0.08% (WRMS), ±0.1% (DIN WTD)
Phonomotor	Frequency Generated Servo DC Motor
Cartridge	Moving Magnet Type (EPC-270C-X)
Stylus	Diamond (EPS-270SD)
Stylus Pressure	1.5 ~ 2.0g
Frequency Response	20 Hz ~ 20 kHz (DIN)
Separation	23 dB (DIN)
Signal/Noise Ratio	65 dB (DIN-B)

TAPE DECK SECTION

Deck System	Full-Auto-Stop Cassette System, Tape Programme Sensor
Track System	4-Track, 2-Channel
Recording System	AC Bias (50 kHz) with Dolby NR System
Erasing System	AC Erase (50 kHz)
Tape Speed	4.75 cm/sec. (1-7/8 i.p.s.)
Frequency Response	20 Hz ~ 15 kHz (Normal) 20 Hz ~ 16 kHz (Fe-Cr) 20 Hz ~ 16 kHz (CrO_2)
Signal/Noise Ratio:	
Dolby NR—Out	DIN: 53 dB (normal) 55 dB (Fe-Cr) 55 dB (CrO_2)
Dolby NR—In	10 dB or more improved at more than 5 kHz (DIN): 60 dB (Normal) 63 dB (Fe-Cr) 63 dB (CrO_2)
Erase Ratio	70 dB (DIN)
Channel Separation	40 dB (DIN)
Crosstalk	60 dB (DIN)
Wow and Flutter	0.1% (WRMS), ±2% (DIN)

POWER CONSUMPTION 220W

POWER SUPPLY ..... AC 110V, 120V, 220V, 240V, 50/60 Hz

DIMENSIONS (W × H × D) ..... 800 mm × 144 mm × 443 mm

WEIGHT ..... 14.9 kg

* Specifications are subject to change without notice for further improvement.

DEUTSCH

Technische Daten

VERSTÄRKER

Ausgangsleistung:
- Musik: 42W × 2 an 4Ω (1% Klirr)
- Sinus: 32W × 2 an 4Ω (bei Aussteuerung eines Kanals, 1% Klirr)
  25W × 2 an 4Ω (bei Aussteuerung beider Kanäle, 1% Klirr)

Frequenzgang: 10 Hz bis 40 kHz, 1,5 dB (DIN)
Leistungsbandbreite: 10 Hz bis 25 kHz, −3 dB (DIN)
Eingangsempfindlichkeit und Impedanz:
- Mikrofon: 1 mV, 3kΩ
- Externes Tonbandgerät: 150 mV, 47kΩ
- Aufnahmeausgang und Impedanz: 40 mV, 82kΩ

Klangregler:
- Bässe: ±15 dB bei 50 Hz
- Höhen: ±15 dB bei 15 kHz

Gehörrichtige Frequenzgangkorrektur: +10 dB bei 50 Hz (Lautstärkepegel −30 dB)

UKW-EMPFANGSTEIL

Abstimmsystem: Kapazitätsdiode (6 Festsendertasten plus eine Taste für manuelle Abstimmung)
Empfangsbereich: 87,5 ~ 108 MHz
Zwischenfrequenz (ZF): 10,7 MHz
Eingangsempfindlichkeit: 2,0 μV (Fremdspannungsabstand 26 dB, Hub 40 kHz) (DIN)
2,0 μV (IHF)
Spiegelfrequenzdämpfung: 45 dB (98 MHz)
Fremdspannungsabstand: 65 dB (bei 1 kHz, 60 dB, 40 kHz)
Klirrfaktor:
- Mono: 0,15% (bei 1 kHz, 60 dB, 40 kHz)
- Stereo: 0,3% (bei 1 kHz, 60 dB, 40 kHz)

Übersprechdämpfung: 45 dB (bei 1 kHz, 60 dB, 40 kHz)
35 dB (250 Hz ~ 6,3 kHz, 60 dB, 40 kHz) (DIN)
33 dB (6,3 ~ 10 kHz, 60 dB, 40 kHz) (DIN)
Trenschärte: 60 dB (bei 1 kHz, 60 dB, 40 kHz)

AM-EMPFANGSTEIL

Empfangsbereiche: MW: 525 ~ 1.605 kHz (572 ~ 187m)
LW: 145 ~ 350 kHz (2.070 ~ 857m)
SW: 5,9 ~ 18 MHz (50,8 ~ 16,7m)
Zwischenfrequenz (ZF): 455 kHz
Empfindlichkeit: MW: 100 μV/m (1 MHz)
LW: 200 μV/m (240 kHz)
SW: 10 μV (12 MHz)
Spiegelfrequenzdämpfung: MW: 50 dB (1 MHz)
LW: 40 dB (240 kHz)
SW: 17 dB (12 MHz)

PLATTENSPIELER

Prinzip: Plattenspieler mit Direktantrieb
Plattenteller: 300 mm
Drehzahlen: 33-1/3 und 45 UpM, mit Drehzahl-Feineistellung und Stroboskop
Gleichlaufschwankungen: 0,08 (Mittelwert, bewertet)
±0,1% (DIN. bewertet)
Plattentellerantrib: Frequenzgesteuerter Gleistrommotor
Tonabnehmer: Magnet-Tonabnehmer (EPC-270C-X)
Abtastnadel: Diamant (EPS-270SD)
Auflagekraft: 1,5 ~ 2,0g
Frequenzgang: 20 ~ 20 kHz (DIN)
Übersprechdampfung: 23 dB (DIN)
Fremdspannungsabstand: 65 dB (DIN B)

CASSETTEN-TONBANDGERÄT

Prinzip: Bandenden-Abschaltautomatik bei allen Bandlauffunktionen, Band-Programm-Sensor
Spursystem: Vierteispur, Stereo
Aufnahmesystem: HF-Vormagnetisierung (50 kHz) mit Dolby-Rauschunterdrückung
Löschsystem: HF-Löschung (50 kHz)
Bandgeschwindigkeit: 4,75 cm/s
Frequenzgang: 20 ~ 15 kHz (Normal)
20 ~ 16 kHz (Fe-Cr)
20 ~ 16 kHz (CrO_2)
Fremdspannungsabstand:
- Ohne Dolby: DIN: 53 dB (Normal)
  55 dB (Fe-Cr)
  55 dB (CrO_2)
- Mit-Dolby: (über 5 kHz eine Verbesserung von mehr als 10 dB) (DIN):
  60 dB (Normal)
  63 dB (Fe-Cr)
  63 dB (CrO_2)

Löschdämpfung: 70 dB (DIN)
Übersprechdämpfung: 40 dB (DIN)
Stereo-Kanaltrennung: 60 dB (DIN)
Gleichlaufschwankungen: 0,1% (Mittelwert, bewertet)
±0,2% (DIN WTD)

LEISTUNGSAUFNAHME: 220W

NETZSPANNUNG UND FREQUENZ: 110V, 120V, 220V, 240V, 50/60 Hz

ABMESSUNGEN (B × H × T): 800 mm × 144 mm × 443 mm

GEWICHT: 14,9 kg

* Änderungen der technischen Daten und des Designs im Sinne ständiger Verbesserung vorbehalten.

FRANÇAIS

Spécifications

SECTION AMPLIFICATEUR

Puissance de sortie: 42W × 2 (DHT 1%, 4Ω) PSM
32W × 2 (DHT 1%, 4Ω) FET, Un canal en fonction
25W × 2 (DHT 1%, 4Ω) FET, Deux canaux en fonction
Réponse de fréquence: 10 Hz ~ 40 kHz, ±1,5 dB (DIN)
Largeur de bande passante: 10 Hz ~ 25 kHz, −3 dB (DIN)
Impédance et sensibilité d'entrée:
- Micro: 1 mV, 3kΩ
- Bande ext: 150 mV, 47kΩ
- Impédance et sortie enr: 40 mV, 82kΩ

Réglages de tonalité:
- Grave: ±15 dB à 50 Hz
- Aigu: ±15 dB à 15 kHz

Réglage de contour sonore: +10 dB à 50 Hz (Volume à la position −30 dB)

SECTION TUNER FM

Système d'accord: Diode varactor (6 pré-sélecteurs et 1 accord manuel)
Echelle de fréquence: 87,5 ~ 108 MHz
Fréquence intermèdiate (FI): 10,7 MHz
Sensibilité: 2,0 μV (S/B 26 dB Mod. 40 kHz) (DIN)
2,0 μV (IHF)
Rapport d'image: 45 dB (98 MHz)
Rapport de signal bruit: 65 dB (à 1 kHz, 60 dB, 40 kHz)
Distorsion:
- Mono: 0,15% (à 1 kHz, 60 dB, 40 kHz)
- Stéréo: 0,3% (à 1 kHz, 60 dB, 40 kHz)

Séparation stéréo: 45 dB (à 1 kHz, 60 dB, 40 kHz)
35 dB (à 250 Hz ~ 6,3 kHz, 60 dB, 40 kHz) (DIN)
33 dB (à 6,3 ~ 10 kHz, 60 dB, 40 kHz) (DIN)
Sélectivité: 60 dB (à 1 kHz, 60 dB, 40 kHz)

SECTION TUNER AM

Echellé de fréquence: PO: 525 ~ 1.605 kHz (572 ~ 187m)
GO: 145 ~ 350 kHz (2.070 ~ 857m)
OC: 5,9 ~ 18 MHz (50,8 ~ 16,7m)
Fréquence intermédiate (FI): 455 kHz
Sensibilité: PO: 100 μV/m (1 MHz)
GO: 200 μV/m (240 kHz)
OC: 10 μV (12 MHz)
Rapportimage PO: 50 dB (1 MHz)
GO: 40 dB (240 kHz)
OC: 17 dB (12 MHz)

SECTION TOURNE-DISQUE

Système de tourne-disque: Entrainement par direct et retour automatique
Plateau tourne-disque: 30 cm
Vitesses du tourne-disque: 33-1/3 et 45 t/min. 2 vitesses avec réglage micrometrique et stroboscope
Pleurage et scintillement: 0,08% (valeur eff. pondérée), ±0,1% (DIN WTD)
Phonomoteur: Moteur a cour. cont. asservi à fréquence engendrée
Cartouche: Type à aimant mobile (EPC-270C-X)
Pointe de lecture: Diamant (EPS-270SD)
Pression pointe: 1,5 ~ 2,0g
Réponse de fréquence: 20 Hz ~ 20 kHz (DIN)
Séparation: 23 dB (DIN)
Rapport de signal/bruit: 65 dB (DIN-B)

SECTION MAGNETOPHONE

Système magnétophone: Arrêt entierement automatique, système de detecteur de programme de bande
Système de piste: 4 pistes, 2 canaux
Système d'enregistrement: Polarisation Cour. Alt. (50 kHz) avec système Dolby NR
Système d'effacement: Effacement Cour. Alt. (50 kHz)
Vitesse de bande: 4,75 cm/s
Réponse de fréquence: 20 Hz ~ 15 kHz (Normale)
20 Hz ~ 16 kHz (Fe-Cr)
20 Hz ~ 16 kHz (CrO_2)
Rapport de signal/bruit:
- Sortie Dolby Nr: DIN: 53 dB (Normale)
  55 dB (Fe-Cr)
  55 dB (CrO_2)
- Entrée Dolby Nr: 10 dB ou plus amélioré à plus de 5 kHz (DIN):
  60 dB (Normale)
  63 dB (Fe-Cr)
  63 dB (CrO_2)

Rapport d'effacement: 70 dB (DIN)
Séparation de canal: 40 dB (DIN)
Diaphonie: 60 dB (DIN)
Pleurage et scintillement: 0,1% (valeur eff. pondérée), ±2% (DIN WTD)

CONSOMMATION DE PUISSANCE: 220W

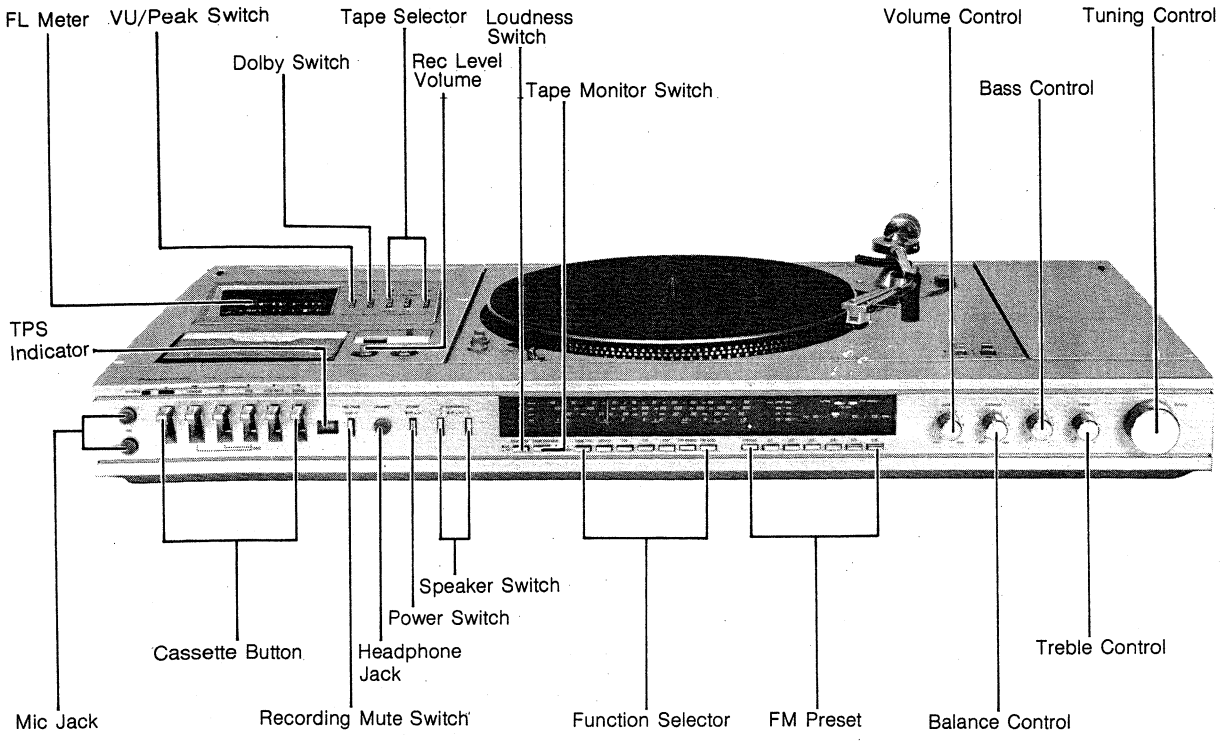
ALIMENTATION: Cour. Alt. 110V, 120V, 220V, 240V, 50/60 Hz

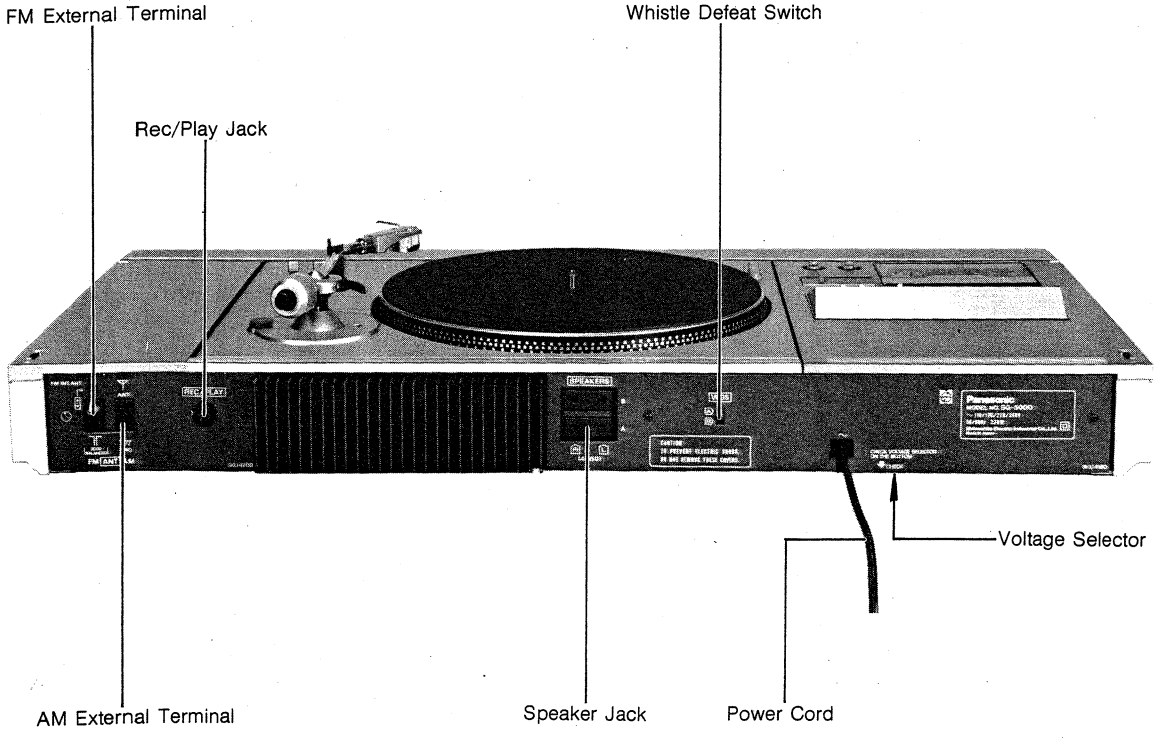
DIMENSIONS (L × H × P): 800 mm × 144 mm × 443 mm

POIDS: 14,9 kg

* Les spécifications de le présentation sont susceptibles d'être modifiées sans préavis par suite d'amélioration éventuelle de nos appareils.

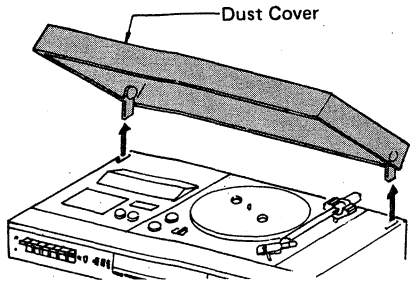
LOCATION OF CONTROLS



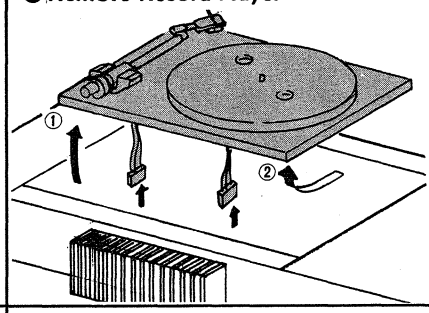


DISASSEMBLY INSTRUCTIONS

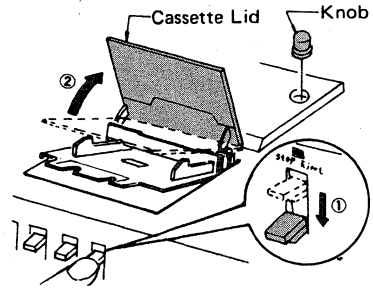
❶ Remove Dust Cover



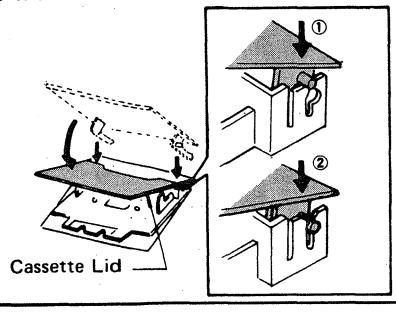
❷ Remove Record Player



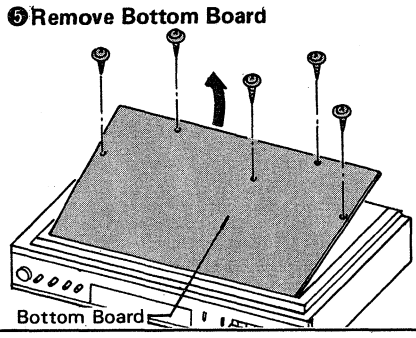
❸ Remove Cassette Lid



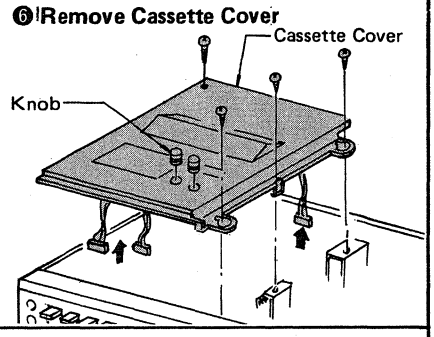
❹ Install Cassette Lid



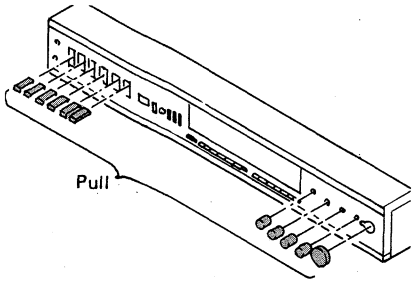
❺ Remove Bottom Board



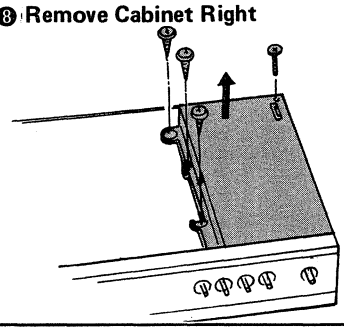
❻ Remove Cassette Cover



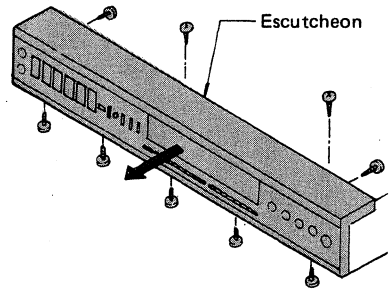
❼ Remove Knobs



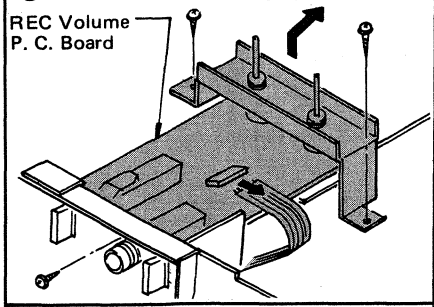
❽ Remove Cabinet Right



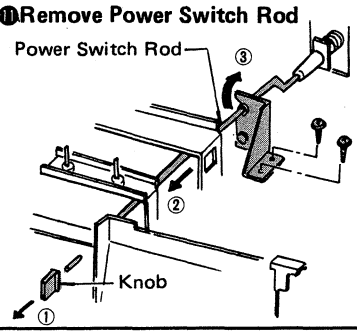
❾ Remove Escutcheon



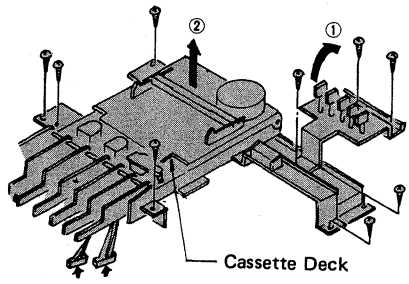
❿ Remove REC Volume P. C. Board



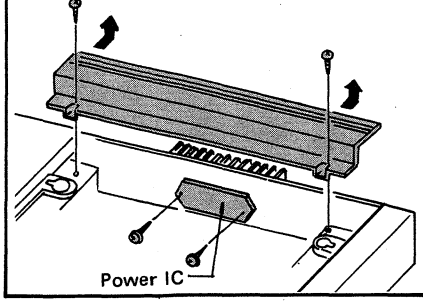
⓫ Remove Power Switch Rod



⓬ Remove Cassette Deck



⓭ Remove Power IC



- **To Replace Cassette Lid** ..... Refer to ❸, ❹
- **To Replace Parts on P.C. Board** ..... Refer to ❶~❸, ❺~⓭
- **To Remove Cassette Deck** ..... Refer to ❶~❸, ❻~⓬
- **To Replace Power IC** ..... Refer to ❶, ❷, ❺, ⓭

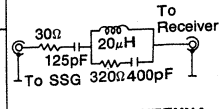
Note:
Never attempt to press against the balance weight block on the record player.

ENGLISH

ALIGNMENT INSTRUCTIONS–1

■ AM Alignment

Control Positions:
1. Volume Control ..... Maximum
2. Function Selector ..... LW, MW, SW
3. Loudness Switch ..... OFF
4. Output of signal generator should be no higher than necessary to obtain output reading.

STEP	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUST	REMARKS
	CONNECTION	FREQUENCY				
AM-IF AND RF ALIGNMENT						
1	Fashion loop of several turns of wire and radiate signal into loop of receiver.	470 kHz (for UK) 455 kHz 30% Mod. with 400 Hz	Point of non-interference	Output meter across speaker jack (L). (Imp. 4Ω)	T201 (AM 1st IFT) T202 (AM CFT) T203 (AM DET)	• Adjust for maximum output.
2 (LW)		145 kHz 30% Mod. with 400 Hz	145 kHz (9.3 mm)		L202 (LW ANT Coil) L205 (LW OSC Coil)	• Adjust for maximum output by sliding coil L202 along ferrite core. • Refer to **Note**.
3 (LW)		350 kHz 30% Mod. with 400 Hz	350 kHz (141.2 mm)		CT202 (LW ANT Trimmer) CT205 (LW OSC Trimmer)	• Adjust for maximum output. • Repeat steps (2) and (3).
4 (MW)		550 kHz 30% Mod. with 400 Hz	550 kHz (16.5 mm)		L201 (MW ANT Coil) L204 (MW OSC Coil)	• Adjust for maximum output by sliding coil L201 along ferrite core. • Refer to **Note**.
5 (MW)		1500 kHz 30% Mod. with 400 Hz	1500 kHz (135.5 mm)		CT201 (MW ANT Trimmer) CT204 (MW OSC Trimmer)	• Adjust for maximum output. • Repeat steps (4) and (5).
6 (SW)	Connect to EXT. antenna and ground through SW Dummy antenna.	5.9 MHz 30% Mod. with 400 Hz	5.9 MHz (5.5 mm)		L203 (SW ANT Coil) L206 (SW OSC Coil)	• Adjust for maximum output.
7 (SW)	 SW DUMMY ANTENNA	18 MHz 30% Mod. with 400 Hz	18 MHz (144.2 mm)		CT203 (SW ANT Trimmer) CT206 (SW OSC Trimmer)	• Adjust for maximum output. • Repeat steps (6) and (7).

Note: Cement antenna coil with wax after completing alignment.

ENGLISH

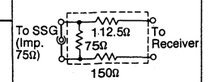
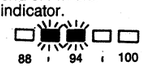
ALIGNMENT INSTRUCTIONS–2

■ FM-IF Alignment

Control Positions:
1. Volume Control ..... Minimum (IF), Maximum (RF)
2. Function Selector ..... FM mono (IF, RF), FM auto (MPX)
3. FM Preset... ..... MANUAL, P1, P2, P3, P4, P5, P6,
4. Loudness Switch..... OFF
5. FM Preset Volume (VR102~107) ..... Turn them fully counterclockwise (RF)
6. Preset Volume (VR108, 109, 110, 901) ..... Turn set to the center point (RF)

STEP	SIGNAL GENERATOR OR SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUST	REMARKS
	CONNECTION	FREQUENCY				
1	High side through 0.01 μF between point TP Ⓐ and TP101 (Earth)	10.7 MHz (400 kHz SWP.)	Point of non-interference	Connect vent. amp input of scope between point TP201 and TP202 (Earth)	L5	• Adjust T101 for maximum amplitude and symmetrical curve.
2	No connection	No signal	Free	Connect DC VTVM between TP204 and TP205.	T204–A (Brown Core)	• Adjust T204-A for 0 mV on VTVM reading.

■ FM-RF Alignment

STEP	SIGNAL GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	FM PRESET BUTTON	ADJUST	REMARKS
	CONNECTION	FREQUENCY					
1	Connect to EXT. FM Antenna terminal through dummy antenna.  FM DUMMY ANTENNA	106 MHz 30% Mod. with 400 Hz	106 MHz (132.02 mm)	Output meter across speaker jack (L)	MANUAL	VR901	• Adjust for maximum output. • Repeat steps (1)~(3).
2		87.4 MHz 30% Mod. with 400 Hz	87.4 MHz (0 mm)			VR108	
3					P1	VR109	
4		92.5 MHz 30% Mod. with 400 Hz	92.5 MHz	FM dial indicator		VR110	• Adjust VR110 to get same lightness at 2nd and 3rd (94 MHz) LED from left end of FM dial indicator. 
To correct the drift of FM band coverage (87.5~108 MHz), adjust VR108, 109, 110 and VR901.							
FM MONO DISTORTION ALIGNMENT							
1	Connect to EXT. FM antenna terminal through dummy antenna.	98 MHz 100% Mod. with 400 Hz	98 MHz	Distortion meter to speaker jack (L).	.....	T204-B (Green core) (Disc IFT)	• Adjust for minimum distortion meter indication.
FM MUTING LEVEL ALIGNMENT							
1	Connect to EXT. FM antenna terminal through dummy antenna.	98 MHz (20 dB) 100% Mod. with 400 Hz	98 MHz (at FM Mono Position)	Output meter to speaker jack (L).	.....	VR201	• FM AUTO position. • Turn fully clockwise. • Adjust to that output can be obtained.

ENGLISH

ALIGNMENT INSTRUCTIONS–3

■ FM Stereo Alignment

EQUIPMENT CONNECTION	ADJUST	REMARKS
Connect frequency counter to TP301 and TP202 (Earth) at 98 MHz, 30% modulation with 60 dB input.	VR302	Adjust VR302 for 19 kHz ± 50 Hz on frequency counter reading.

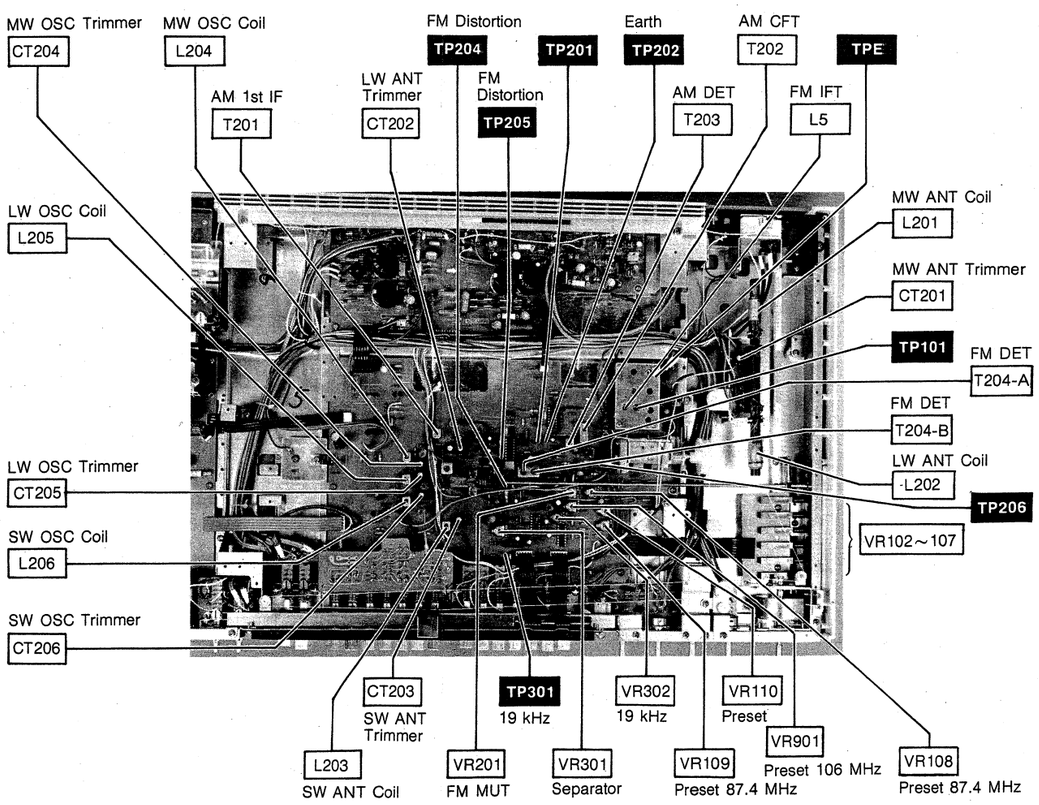
SEPARATION ALIGNMENT

Notes:
1. Stereo Modulator: Connect Stereo Modulator to EXT. Mod. terminal of signal generator.
2. Signal Generator: Modulation Rate of 19 kHz Pilot Signal 10%
   Modulation Rate of Right and Left Signal 27%
   Output Level..... 60 dB
3. Tuner (Balance Control): Adjust balance control so that output level from both channels becomes equal.

EQUIPMENT CONNECTION			ADJUST	REMARKS
SIGNAL GENERATOR	VTVM	OSCILLOSCOPE		
Connect to EXT. FM antenna terminal through dummy antenna.	Connect across speaker jack. (Imp. 4Ω).	Connect vertical amp. input of scope to terminals of VTVM.	VR301 (Separation (Control)	Adjust VR301 for minimum indication of VTVM from the left side output when the right side of stereo modulation is modulated. Adjust VR301 in the same way for the right side. Adjust for best balance between "L to R" and "R to L" separation.

Note: When aligning separation, disconnect frequency counter.

ALIGNMENT POINTS (RADIO)
ANWEISUNGEN ZUM ABGLEICH (EMPFANGSGERÄT)



ALIGNMENT INSTRUCTIONS–4

■ CASSETTE TAPE DECK ALIGNMENT

BIAS ALIGNMENT

Control Positions: 1. Tape Deck Condition..... Recording Condition
2. Dolby Switch..... OUT

STEP	ALIGNMENT ITEM	VTVM CONNECTION		TAPE SELECTOR	WHISTLE DEFEAT SWITCH	ADJUST	REMARKS
		Positive	Negative				
1	OSC Coil	TP801	TP802	NORMAL	A	L804	• Adjust L804 for max. indicator on VTVM and should 0.5V when the whistel defeat switch is B.
2	Erase Voltage			CrO_2	A and B	VR801	• Adjust VR801 for 12V indication on VTVM.
3	Recording Bias	TP401 (L, Ch)	TP403	NORMAL	A	VR802	• Adjust VR802 and VR803 for 3.4 ± 0.1 mV indication on VTVM.
		TP402 (R, Ch)				VR803	

FL METER ALIGNMENT

Notes: 1. Tape Deck Condition ..... Recording Condition.
2. Apply 250 mV, 1 kHz to Rec/Play Terminal.

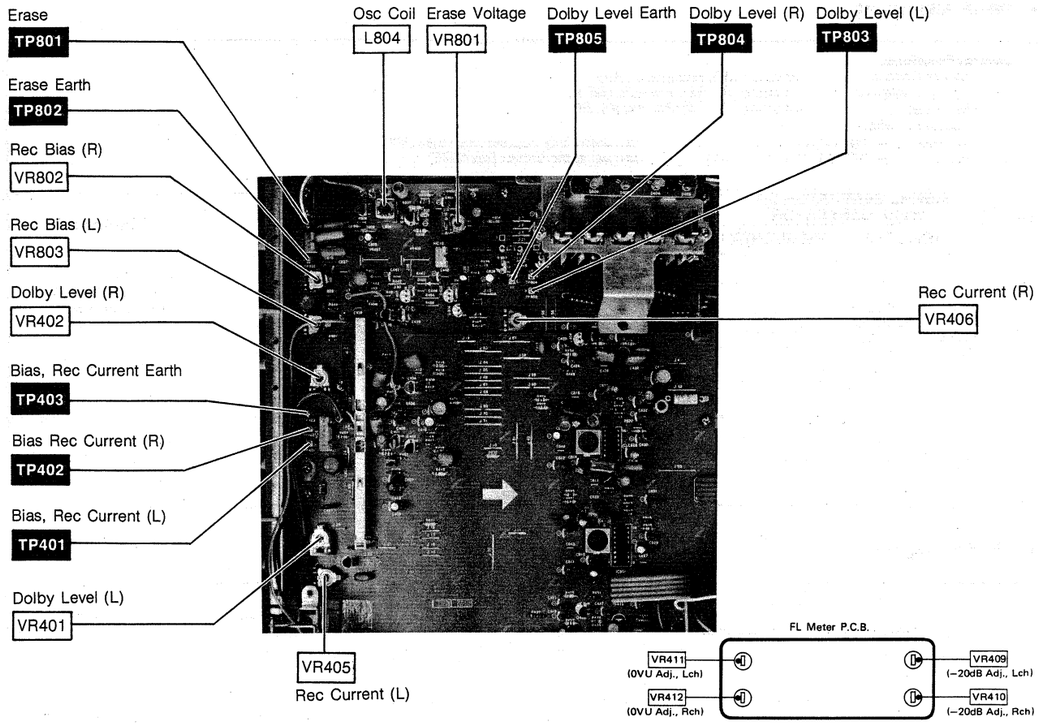
STEP	VTVM CONNECTION		TAPE MONITOR SWITCH	VU/PEAK SELECT	DOLBY NR SWITCH	ADJUST	REMARKS
	Positive	Negative					
1	TP803 (L ch.)	TP805	EXT. Tape	Peak	IN	Rec Level Volume	• Adjust Rec Level Volume to get 580 mV reading on VTVM. • Attenuate the applied signal by 3 dB, and confirm the reading on VTVM reaches about 410 mV.
	TP804 (R ch.)						
2	No connection					VR411 (L ch.)	• Adjust VR411 and VR412 to get 0 dB reading on FL meter.
						VR412 (R ch.)	
3	No connection					VR409 (L ch.)	• Attenuate the applied signal by 20 dB, then adjust VR409 and VR410 to get −20 dB reading on FL meters. • Repeat Steps 2 and 3 above.
						VR410 (R ch.)	

AZIMUTH, DOLBY, REC CURRENT ALIGNMENT

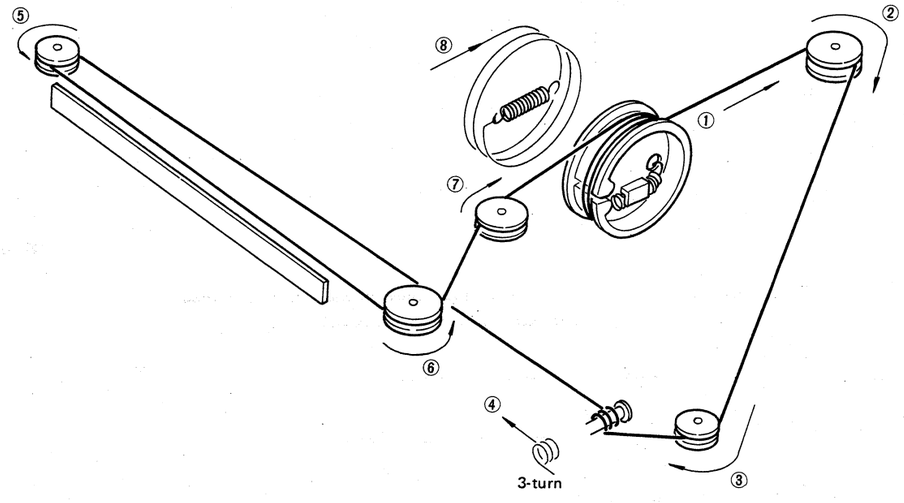
Control Positions: 1. Tape Deck Condition..... PLAY Condition
2. Tape Selector..... NORMAL

STEP	ALIGNMENT ITEM	VTVM CONNECTION		TEST TAPE	DOLBY SWITCH	ADJUST	REMARKS
		Positive	Negative				
1	R/P Head Azimuth	Speaker Terminal	Speaker Terminal	VTT653	OUT	Head Screw	• Adjust screw for max. indication on VTVM.
2	Dolby Level	TP803	TP805	TM6130	IN	VR401	• Adjust VR401 and VR402 for 580 ± 20 mV indication on VTVM.
		TP804				VR402	
3	Rec Current	TP401 (L ch)	TP403	.....		VR405	• Connect TP801 to TP802. • Apply 1 kHz, 300 mV to EXT Tape and Adjust Rec level volume at dolby level. • Adjust VR405 and VR406 for 0.50 ± 0.02 mV reading on VTVM.
		TP402 (R ch)				VR406	

ALIGNMENT POINTS (CASSETTE TAPE DECK)



DIAL CORD STRINGING GUIDE



DEUTSCH

ANWEISUNGEN ZUM ABGLEICH—1

■ AM-Abgleich

Hinweis: Siehe Seite 8 von Abgleichpunkte.

Hinweise:
1. Lautstarkeregler ..... Maximum
2. Empfangsbereichschaltet ..... LW, MW, SW
3. Lauteit..... AUS
4. Der ausgang des Messenders sollte nicht hoher als notig sein, um den Ausgangswert zu erhalten.

SCHRITTE	MESSOSZILLATOR oder WOBBELGENERATOR		EINSTELLUNG DER ABSTIMM-SKALA	AMZEIGE (RVM oder SKOP)	EINSTELLEN	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
AM-ZF-ABGLEICH UND HF-ABGLEICH						
1	Aus mehreren Drahtwindungen eine Schleife bilden und das Signal in die Schleife des Receivers abstrahlen.	455 kHz 30% Mod. mit 400 Hz.	Punkt der Nicht-interferenz	Ausgangsmeß-instrument über Lautsprecher-buchse (L). (Imp. 4Ω)	T201 (AM 1. Zwischen-frequenz-Überträger) T202 (AM 2. Zwischen-frequenz-Überträger) T203 (AM 3. Zwischen-frequenz-Überträger)	• Auf maximalen Ausgang einstellen.
2 (LW)		145 kHz 30% Mod. mit 400 Hz	145 kHz (9,3 mm)		L202 (LW-Antennenspule) L205 (LW-Schwingspule)	• Auf maximalen Ausgang einstellen durch Verschieben der Spule L202 entlang dem Ferritkern. • Siehe **Hinweis**.
3 (LW)		350 kHz 30% Mod. mit 400 Hz	350 kHz (141,2 mm)		CT202 (LW-Antennentrimmer) CT205 (LW-Schwingtrimmer)	• Auf maximalen Ausgang einstellen. • Schritte (2) und (3) wiederholen.
4 (MW)		550 kHz 30% Mod. mit 400 Hz	550 kHz (16,5 mm)		L201 (MW-Antennenspule) L204 (MW-Schwingspule)	• Auf maximalen Ausgang einstellen durch Verschieben der Spule L201 entlang dem Ferritkern. • Siehe **Hinweis**.
5 (MW)		1500 kHz 30% Mod. mit 400 Hz	1500 kHz (135,5 mm)		CT201 (MW-Antennentrimmer) CT204 (MW-Schwingtrimmer)	• Auf maximalen Ausgang einstellen. • Schrite (4) und (5) wiederholen.
6 (KW)	Über Hilfsantenne mit EXT. FM-Klemme der Antenne und Erde verbinden.	5,9 MHz 30% Mod. mit 400 Hz	5,9 MHz (5,5 mm)		L203 (KW-Antennenspule) L206 (KW-Schwingspule)	• Auf maximalen Ausgang einstellen
7 (KW)	Zum Empfänger 30Ω 125pF 200 20μH 320Ω 400pF Zum Messoszillator **KÜNSTLICHE KW-ANTENNE**	18 MHz 30% Mod. mit 400 Hz	18 MHz (144,2 mm)		CT203 (KW-Antennentrimmer) CT206 (KW-Schwingtrimmer)	• Auf maximalen Ausgang einstellen. • Schrite (6) und (7) wiederholen.

Hinweis: Die Antennenspule nach dem Abgleich mit Wachs beschichten.

DEUTSCH

ANWEISUNGEN ZUM ABGLEICH—2

■ FM-ZF-Abgleich

Hinweise:
1. Lautstärkeregler ..... Maximum (AM-ZF und HF, FM-HF)
2. Empfangsbereichschalter..... LW, MW, FM MONO und FM AUTO
3. FM-Vorprogrammierung ..... MANUAL, P1, P2, P3, P4, P5 und P6
4. Lautheit..... AUS
5. Lautstärke der FM-Vorprogrammierung (VR102～VR107)..... Ganz im Gegen-Uhrzeigersinn drehen
6. Lautstarke (VR108,109,110,901) ..... Bis zur Mitte drehen

SCHRITTE	MESSOLZILLATOR oder WOBBELGENERATOR		EINSTELLUNG DER ABSTIMM-SKALA	AMZEIGE (RVM oder SKOP)	EINSTELLEN	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
1	Hohe Seite durch 0,01 μF zwischen Punkt TP101 und TPE (Erde).	10,7 MHz (400 kHz SWP.)	Punkt der Nicht-Interferenz	Vertikalen Verstärkereingang des Skop zwischen Punkt TP201 und TP202 (Erde) anschliessen.	L5	• T101 auf maximale Amplitude und symmetrische Kurve einstellen.
2	Kein Auschluss	Kain Signal	Frei	DC RVM zwischen TP204 und TP205 anschliessen.	T204-A (Braun Kern)	• T204-A auf 0 mV auf der RVM-Anzeige

■ FM-HF-Abgleich

SCHRITT	MESSOSZILLATOR		EINSTELLUNG DER ABSTIMM-SKALA	ANZEIGE (RVM oder SKOP)	UKW-VORPROGRAM-MIERUNGS-TASTE	EINSTELLEN	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ					
1	Über Hilfsantenne mit EXT. FM-Antennenklemme verbinden. Zu SSG (Imp 75Ω) Zum Receiver 112.5Ω 75Ω 150Ω **FM-HILFSANTENNE**	106 MHz 30% Mod. mit 400 Hz	106 MHz (132,02 mm)	Ausgangsmess-instrument über Lautsprecher-buchse (L)	MANUAL	VR901	• Auf maximalen Ausgang einstellen. • Schritte (1) bis (3) wiederholen.
2		87,4 MHz 30% Mod. mit 400 Hz	87,4 MHz (0 mm)			VR108	
3					P1	VR109	
4		92,5 MHz 30% Mod. mit 400 Hz	92,5 MHz	UKW-Anzeige		VR110	• VR110 für gleiche Leichte am 2. und 3. (94 MHz) LED vom linken Ende des UKW-Anzeigers einstellen. 88 94 100
Hinweis: Zur Korrektur der Verschiebung des UKW-Bandbereichs (87,5～108 MHz) VR108, 109, 110 und VR902 einstellen.							
UKW-MONO-VERZERRUNGSABGLEICH							
1	Über Hilfsantenne mit EXT-FM-Antennenklemme verbinden.	98 MHz 100% Mod. mit 400 Hz	98 MHz	Verzerrungsmesser zur Lautsprecherbuchse (L).	.....	T204-B (Grüner Kern) (Scheibe/Zwischenfrequenz-übertrager)	• Auf minimale Anzeigen des Verzerrungsmessers einstellengt
1	Über Hilfsantenne mit EXT. FM Klemme der Antenne verbinden.	98 MHz (20 dB) 100% Mod. Mit 400 Hz	98 MHz	Ausgangsmess-instrument über Lautsprecher-buchse (L). (Imp. 4Ω)	.....	VR201	• Auf die Position FM AUTO. • Voll im Gegenuhrzeigersinn drehen. • Auf den Ausgang einstellen, der erreicht werden kann.

DEUTSCH

ANWEISUNGEN ZUM ABGLEICH—3

■ UKW-Stereo-Abgleich

Hinweis: Siehe Seite 8 von Abgleichpunkte.

GERÄTE-ANSCHLUSS	EINSTELLEN	BEMERKUNGEN
Frequenz-Zähler an TP301 und TP202 (Erdep bei 98 MHz 30% Modulation mit 60 dB Eingang anschliessen.	VR302	VR302 auf 19 kHz ± 50 Hz am Frequenz-Zähler einstellen.

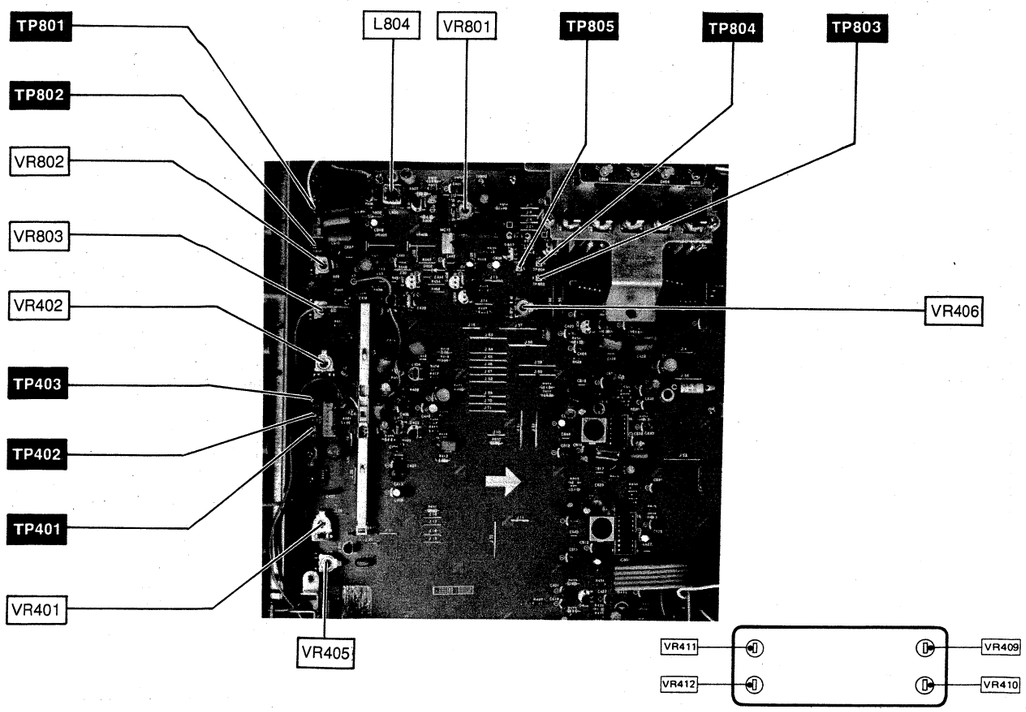
TRENNUNGSABGLEICH

Hinweise:
1. Stereo-Modulator: Stereo-Modulator an EXT. Mod. Anschluss des Messoszillator anschliessen.
2. Messoszillator: Modulation des 19 kHz-Pilottons 10%
   Modulation des rechten und linken Tons 17%
   Ausgangspegel ..... 60 dB
3. Tuner (Balance): Balanceregler so einstellen, dress der Ausgang beider Kanä identisch ist.

GERÄTE-ANSCHLUSS			EINSTELLEN	BEMERKUNGEN
MESSOSZILLATOR	RVM	EINSTELLEN		
Über Hilfsantenne an EXT. FM-Antennen-klemme anschliessen.	Über Laut-sprecher-buchse anschliessen (Imp. 4Ω)	Vertikalen Verstärkereingang des SKOP mit den Anschlüsse des RVM verbinden.	VR301 (Trennungs-regler)	VR301 auf minimale Anzeige des RVM vom linken Ausgang einstellen, wenn die rechte Seite des Stereo-Modulators moduliert wird. VR301 in gleicher Weise für die rechte Seite einstellen. Optimale Balance zwischen „L nach R" und „R nach L" einstellen.

Hinweis: Beim Trennungsabgleich den Frequenzzähler ausschalten.

PUNKT ZUM ABGLEICH (CASSETTEN-TONBAND)



DEUTSCH

ANWEISUNGEN ZUM ABGLEICH—4

■ Abgleich des Kassetten-Tonbandes

VERZERRUNGSABGLEICH

Hinweise:
1. Tonbandgerät auf RECORDING (Aufnahme) einstellen.
2. DOLBY-Schalter auf OUT (Aus) stellen.

SCHRITT	ABGLEICH-OBJEKT	RVM-ANSCHLUSS		BANDWAHL	PFEIF-UNTERDRÜCK-SCHALTER	EIN-STELLEN	BEMERKUNGEN
		Positiv	Negativ				
1	OSC-Spule	TP801	TP802	NORMAL	A	L804	• L804 auf maximale Anzeige am RVM einstellen, d.h. 0,5V wenn der Pfeif-Unterdrückschalter auf B gestellt ist.
2	Lösch-Strom			CrO_2	A und B	VR801	• VR801 auf 12V Anzeige auf RVM einstellen.
3	Aufnahmenver-zerrung	TP401 (L, Ch)	TP403	NORMAL	A	VR802	• VR802 und VR803 auf 3,4 ± 0,1 mV Anzeige auf RVM einstellen.
		TP402 (R, Ch)				VR803	

FL-METERABGLEICH

Hinweise:
1. Tonbandgerät auf RECORDING (Aufnahme) einstellen.
2. 250 mV, 2 kHz an Aufnahme/Wiedergabeklemme anlegen.

SCHRITT	RÖHRENVOLTMETER-ANSCHLUSS		BANDMITHÖR-SCHALTER	WAHL-SCHALTER	DOLBY-NR-SCHALTER	ABGLEICHEN	ANMERKUNGEN
	Positive	Negativ					
1	TP803 (Linker Kanal)	TP805	Zusatzband	Spitze	Ein	Aufnahme-pegellaut-stärke	• Das Rec Stärke-niveau so einstellen, daß der Ablesewert auf VTVM 580 mV ist. • Das angesetzte Signal um 3 dB herabsetzen, und feststellen ob der Ablesewert auf VTVM ungefähr 410 mV erreicht.
	TP804 (Rechter Kanal						
2	Kein Anschluß					VR411 (Linker Kanal)	• VR411 und VR412 so einstellen, daß ein Ablesewert von 0 dB auf dem FL Zähler erhalten wird.
						VR412 (Rechter Kanal)	
3	Kein Anschluß					VR409 (Linker Kanal)	• Das angesetzte Signal um 20 dB herabsetzen, und dann VR409 und VR410 so einstellen, daß ein Ablesewert von —20 dB erhalten wird auf den FL Zähler. • Operation 2 und 3 wiederholen.
						VR410 (Rechter Kanal)	

DEUTSCH

ANWEISUNGEN ZUM ABGLEICH–5

ABGLEICH DES AZIMUTH, DOLBY, UND AUFNAHMESTROMS

Hinweise: 1. Tonbandgerät auf PLAY einstellen.
2. Bandwahl: NORMAL

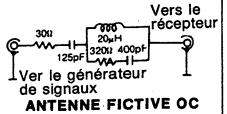
SCHRITTE	ABGLEICH-OBJEKT	RVM-ANSCHLUSS		TESTBAND	DOLBY-SCHALTER	EIN-STELLEN	BEMERKUNGEN
		Positiv	Negativ				
1	R/P-Kopf Azimuth	Lautsprecher Anschluss	Lautsprecher Anschluss	VTT653	OUT	Kopf-schraube	• Schraube auf maximale Anzeige am RVM einstellen. RVM einstellen.
2	Dolby Pegel	TP803	TP805	TM6130	IN	VR401	• VR401 und VR402 auf 580 mV Anzeige am einstellen.
		TP804				VR402	
3	Aufnahme-Strom	TP401	TP403			VR405	• TP801 an TP802 anschliessen • 1 kHz, 300 mV and das EXT Band setzen und das Rec Stärke-niveau auf das Dolby Niveau stellen. • VR405 und VR406 auf Ablesewert 0,5 ± 0,02 mV auf VTVM stellen.
		TP402				VR406	

FRANÇAIS

INSTRUCTIONS D'ALIGNEMENT – 1

■ Alignement de AM

Position des commandes:
1. Controle de volume ..... Au maximum
2. Selecteur de gamme ..... LW, MW, SW
3. Enveloppe sonore ..... OFF
4. La sortie du generateur de signaux ne doit pas être superieure a celle necessaire pour obtenir la lecture de sortie.

ETAPE	GENERATEUR DE SIGNAUX ou DE BALAYAGE		POSITION DU CURSEUR SUR LE CADRAN	VOLTMETRE ou OSCILLOSCOPE	AJUSTAGE	REMARQUES
	CONNEXION	FREQUENCE				
ALIGNEMENT DE F.I. ET H.F. EN AM						
1	Façonner une boucle de quelques tours de fil et rayonner le signal dans la boucle du récepteur.	455 kHz module à 30% sur 400 Hz	Point sans interférence	Voltmètre sur la prise du haut-parleur gauche (L) (Imp. 4Ω).	T201 (1ère TFI sur AM) T202 (2ème TFI sur AM) T203 (3ème TFI sur AM)	• Régler pour une sortie maximale.
2 (LW)		145 kHz module à 30% sur 400 Hz	145 kHz (9,3 mm)		L202 (Bobine d'antenne GO) L205 (Bobine de l'oscillateur GO)	• Régler pour une sortie Maximale en déplaçant la bobine L202 sur le noyau de ferrite. Se référer à **Remarque**.
3 (LW)		350 kHz module à 30% sur 400 Hz	350 kHz (141,2 mm)		CT202 (Compensateur d'antenne GO) CT205 (Compensateur de l'oscillateur GO)	• Régler pour une sortie maximale. • Répéter les étapes (2) et (3).
4 (MW)		550 kHz module à 30% sur 400 Hz	550 kHz (16,5 mm)		L201 (Bobine d'antenne OM) L204 (Bobine de l'oscillateur OM)	• Régler pour une sortie maximale en déplaçant la bobine L201 sur le noyau de ferrite. • Se référer à **Remarque**.
5 (MW)		1500 kHz module à 30% sur 400 Hz	1500 kHz (135,5 mm)		CT201 (Compensateur d'antenne QM) CT204 (Compensateur de l'oscillateur QM)	• Régler pour une sortie maximale. • Répéter les étapes (4) et (5).
6 (SW)	Effectuer la connexion entre l'antenne EXT. et la terre par l'intermédiaire du circuit de couplage FM.	5,9 MHz module à 30% sur 400 Hz	5,9 MHz (5,5 mm)		L203 (Bobine d'antenne OC) L206 (Bobine de l'oscillateur OC)	• Régler pour une sortie maximale.
7 (SW)	 ANTENNE FICTIVE OC	18 MHz module à 30% sur 400 Hz	18 MHz (144,2 mm)		CT203 (Compensateur d'antenne OC) CT206 (Compensateur d'antenne OC)	• Régler pour une sorite maximale. Répéter les étapes (6) et (7).

Remarque: Cimenter la bobine d'antenne à la cire après avoir terminé l'alignement.

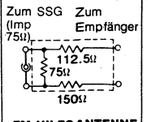
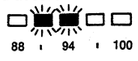
INSTRUCTIONS D'ALIGNEMENT – 2

■ Alignment de F.I. en FM

Remarques:
1. Contrôle de volume ..... Au maximum (AM-IF et RF, FM-RF; au minimum (FM-IF)
2. Sélecteur de gamme ..... LW, MW, FM MONO et FM AUTO
3. Présélection FM ..... MANUAL, P1, P2, P3, P4, P5 et P6
4. Envelope sonore ..... OFF
5. Volume de présélection FM (VR102~107) ..... Tourner tout à fait dans le sens contraire des aiguilles d'une montre.
6. Volume (VR108, 109, 110 et VR901) ..... Tourner la commande jusqu'au point central.

ETAPE	GENERATEUR DE SIGNAUX ou DE BALAYAGE		POSITION DU CURSEUR SUR LE CADRAN	VOLTMETRE ou OSCILLOSCOPE	AJUSTAGE	REMARQUES
	CONNEXION	FREQUENCE				
1	Côté haut connecté par 0,01 µF entre les points TP101 et TPE (masse).	10.7 MHz (400 kHz SWP.)	Point de non-interférence	Connecter l'entrée d'amp. vert. d'oscilloscope entre les points TP201 et TP202 (masse).	L5	• Ajuster T101 pour avoir une amplitude maximale et une courbe symmétrique.
2	Pas de connextion	Pas de signal	Libre	Connecter le voltmètre électron. à cour. cont. entre TP204 et TP205.	T204-A (Noyau Brun)	• Régler T204-A pour obtenir la lecture de 0 mV au voltmètre électron.

■ Alignment de H.F. en FM

ETAPE	GENERATEUR DE SIGNAUX		POSITION DU CURSEUR SUR LE CADRAN	VOLTMETRE ou OSCILLOSCOPE	BOUTON DE PRESELECTION	REGLAGE	REMARQUES
	CONNEXION	FREQUENCE					
1	Connecter la borne d'antenne FM EXT. par l'intermédiaire de l'antenne fictive. 	106 MHz module à 30% sur 400 Hz	106 MHz (132,02 mm)	Voltmètre sur la prise du haut-parleur gauche (L).	MANUAL	VR901	• Régler pour obtenir la sortie maximale. • Répéter les opérations (1)~(3).
2		87,4 MHz module à 30% sur 400 Hz	87,4 MHz (0 mm)			VR108	
3						VR109	
4		92,5 MHz module à 30% sur 400 Hz	92,5 MHz	Indicateur de FM	P1	VR110	• Régler VR110 pour obtenir la même luminosité aux 2ème et 3ème (94 MHz) diodes lumineuses à partir de la gauche de l'indicateur d'accord FM. 
Remarque: Pour corriger la dérive de la gamme de fréquence FM (87,5~108 MHz), régler VR108, 109, 110 et VR901.							
ALIGNEMENT DE LA DISTORSION SUR FM MONO							
1	Connecter à la borne d'antenne EXT. FM via le circuit de couplage.	98 MHz Module à 100% sur 400 Hz	98 MHz	Distorsionmètre à la prise du haut-parleur gauche (L).	.....	T204-B (Noyau vert) (Disque FTI)	• Régler pour une lecture minimale du distorsionmètre.
ALIGNMENT DU NIVEAU DE SOURDINE FM							
1	Connecter à la borne d'antenne EXT. FM via le circuit de couplage.	98 MHz (22 dB) module à 100% sur 400 Hz	98 MHz	Voltmètre sur la prise du haut-parleur gauche (L).	.....	VR201	• En position FM AUTO • Tourner tout à fait dans le sens des aiguilles d'une montre • Régler sur la sortie qui peut être obtenue.

INSTRUCTIONS D'ALIGNEMENT – 3

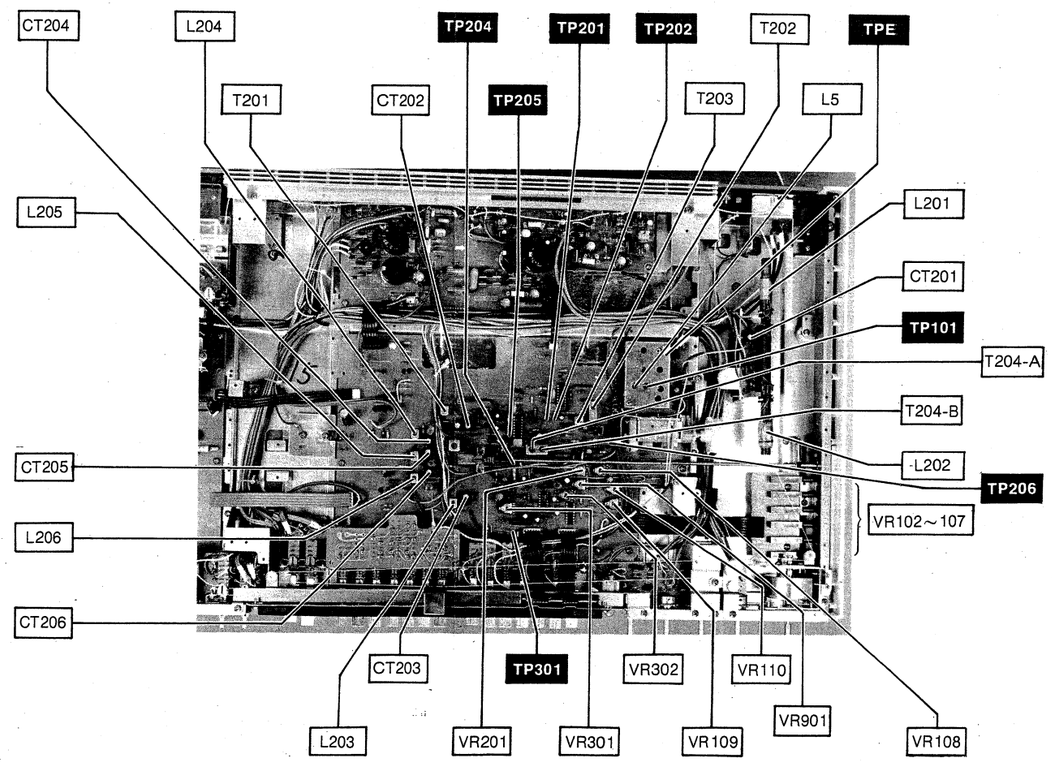
■ Alignement stéréo FM

CONNEXION DES INSTRUMENTS	REGLAGE	REMARQUES
Brancher un fréquencemètre à TP301 et TP202 (Masse) à 98 MHz modulé à 30% sur entrée de 60 dB.	VR302	Ajuster VR302 pour une lecture de 19 kHz ± 50 Hz sur le fréquencemètre.
ALIGNEMENT DE LA DIAPHONIE		

Remarques:
1. Modulateur stéréo: Connecter le modulateur stéréo à la borne Mod. Ext. du générateur de signaux.
2. Générateur de signaux: Taux de modulation du signal pilot de 19 kHz ..... 10%; Taux de modulation des signaux gauche et droit ..... 27%; Niveau de sortie ..... 60 dB
3. Tuner (contrôle d'équilibrage): Régler le contrôle d'équilibrage de sorte que la sortie des deux canaux soit égale.

CONNEXION DES INSTRUMENTS			REGLAGE	REMARQUES
GENERATEUR DE SIGNAUX	VOLTMETRE	OSCILLOSCOPE		
Connecter à la borne d'antenne EXT. FM via le circuit de couplage.	Connecter à la prise de hautparleur. (Inp. 4Ω)	Connecter la sonde verticale à la sonde du voltmètre.	VR301 (Commande de séparation)	Régler VR301 pour une lecture minimale sur le canal lorsque le signal module est sur le canal droit. Régler VR301 de la même manière pour le canal droit. Régler pour un équilibrage parfait entre gauche et droit et pour une meilleure séparation, il faut débrancher le fréquencemètre.
Remarque: Pour l'alignement de la séparation, il faut débrancher le fréquencemètre.				

POINTS D'ALIGNMENT (RADIO)



INSTRUCTIONS D'ALIGNEMENT—4

■ Alignement du Magnétophone à cassette

TENSION DE ALIGNEMENT

Position des commendes: 1. Condition du magnétophone ..... Condition d'enregistrement
2. Commutateur Dolby ..... SORTI

ETAPE	ARTICLE DE ALIGNMENT	CONNEXION DU VOLTMETRE		SELECTEUR DE BANDE	COMMUTATEUR DE SUPPRESSION DE SIFFLEMENT	REGLAGE	REMARQUES
		Positif	Négatif				
1	Bobine OSC	TP801	TP802	NORMAL	A	L804	• Régler L804 pour obtenir l'indication maximale au voltmètre électron. et doit être dans la limite de 0,5V quand le commutateur de suppression de sifflement est B.
2	Courant d'effacement			CrO_2	A et B	VR801	• Régler VR801 pour obtenir l'indication 12V au voltmètre élection.
3	Polarisation d'enregistrement	TP401 (L, Ch)	TP403	NORMAL	A	VR802	• Régler VR802 et VR803 pour obtenir l'indication 3,4 ±0,1 mV au voltmètre électron.
		TP402 (R, Ch)				VR803	

ALIGNMENT D'INDICATEUR FL

Remarques: 1. Conditions du magnétophone ..... Condition d'enregistrement.
2. Appliquer 250 mV, 1 kHz à la borne Rec/Play (enregistrement/reproduction)

ETAP	CONNEXION DU VOLTMETRE ELECTRON		COMMUTATEUR DE CONTROLE DE BANDE	SELECTEUR VU/CRETE	COMMUTATEUR DOLBY NR	REGLAGE	REMARQUES
	Positif	Négatif					
1	TP803 (canal gauche)	TP805	Bande EXT.	Crête	Entrée	Niveau volume d'enregistrement	• Ajuster le volume du niveau d'enregistrement pour obtenir la lecture 580 mV sur le voltmètre électronique. • Atténuer le signal appliqué de 3 dB, puis confirmer la lecture sur le voltmètre électronique qui doit atteindre environ 410 mV.
	TP804 (canal droit)						
2	Pas de connexion					VR411 (canal gauche)	• Ajuster VR411 et VR412 pour obtenir la lecture 0 dB sur l'indicateur FL.
						VR412 (canal droit)	
3	Pas de connexion					VR409 (canal gauche)	• Atténuer le signal appliqué de 20 dB, puis ajuster VR409 et VR410 pour obtenir la lecture —20 dB sur les indicateurs FL. • Répéter les étapes 2 et 3 ci-dessus.
						VR410 (canal droit)	

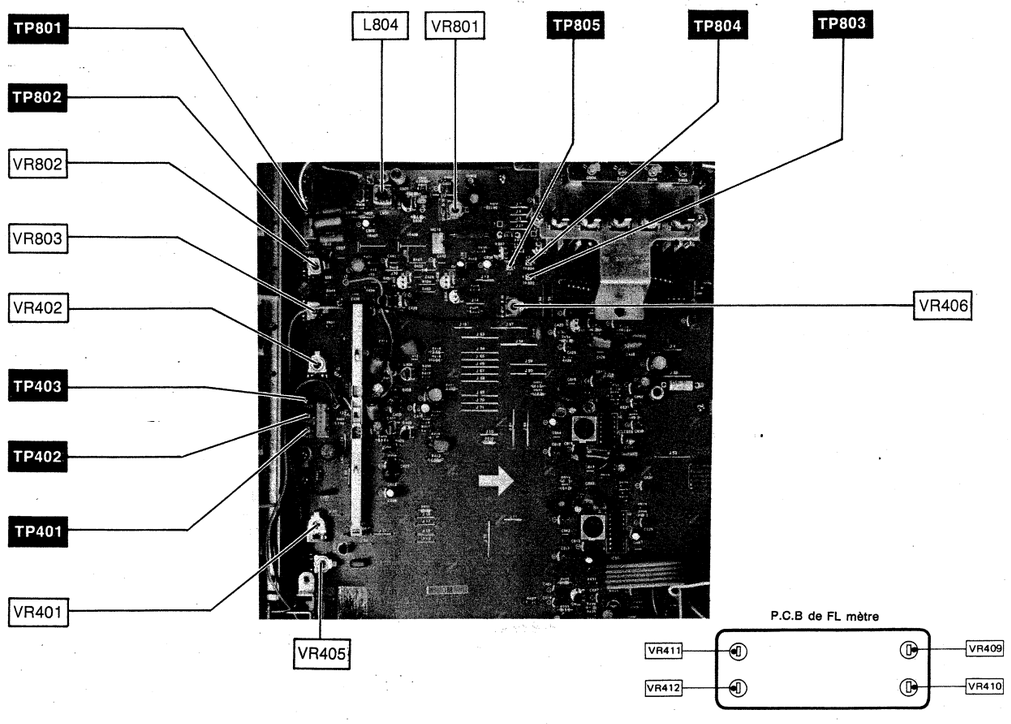
INSTRUCTIONS D'ALIGNEMENT—5

ALIGNEMENT AZIMUT, DOLBY, COURANT REC

Position des commendes: 1. Condition du magnétophone ..... Condition de reproduction PLAY
2. Sélecteur de bande ..... NORMAL

ETAPE	ARTICLE DE ALIGNMENT	CONNEXION DU VOLTMETRE		BANDE D'ESSAI	COMMUTATEUR DE DOLBY	REGLAGE	REMARQUES
		Positif	Négatif				
1	Azimut tête Enr./Rep.	Borne de haut-parleur (Borne)	Borne de haut-parleur (Borne)	VTT653	OUT	Vis de tête	• Régler la vis pour obtenir l'indication au voltmètre électron.
2	Niveau Dolby	TP803	TP805	TM6130	IN	VR401	• Régler VR401 et VR402 pour obtenir l'indication 580 ± 20 mV au voltmètre électron.
		TP804				VR402	
3	Courant Rec.	TP401	TP403	.....		VR405	• Connecter TP801 à TP802. • Appliquer 1 kHz, 300 mV au magnétophone EXT et ajuster le bouton de niveau d'enregistrement au niveau Dolby. • Ajuster VR405 et VR106 pour obtenir la lecture 0,50 ± 0,02 mV sur le voltmètre électronique.
		TP402				VR406	

POINTS D'ALIGNEMENT (MAGNETOPHONE A CASSETTE)



REPLACEMENT PARTS LIST

NOTES:

1. Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
2. Parts No. listed in this Parts List are of Service Parts.
3. Parts No. identified by ● mark are supplied only to the models of Serial No. 94050-001001 to 97050-003520 for UK.

Ref. No.	Part No.	Description	Per Set (pcs.)
TRANSISTORS			
Q021,022	2SC828	TPS	2
Q023,024	2SC828	TPS	2
Q025	2SC828	TPS	1
Q026	2SA564	TPS	1
Q201	2SC1359	AM Conv	1
Q203	2SC945L	FM Muting	1
Q204	2SA564	Switching	1
Q401,402	2SC1327	EQ/MIC Amp	2
Q403,404	2SC1327	EQ/MIC Amp	2
Q405,406	2SC1684	Rec. Amp	2
Q409,410	2SC828	Meter Amp	2
Q411,412	2SC828	Meter Amp	2
Q801	2SC828	Bias Osc.	1
Q802	2SC1383	Bias Amp	1
Q803,804	2SC828	Muting	2
Q805,806	2SC945L	Muting	2
Q807	2SA564	Muting	1
Q808	2SC828	Inverter	1
Q809	2SC828	TPS	1
Q810	2SC1568	TPS	1
Q811,812	2SC828	End Sensor	2
Q813	2SC1568	End Sensor	1
Q851,852	2SC828	Muting	2
Q853	2SA564	Muting	1
Q854,855	2SC945L	Muting	2
Q856,857	2SC828	One Shot Multi-vibrator	2
Q902	2SC1398	Stabilizer	1
INTEGRATED CIRCUITS			
IC101	UAA170L	Dial LED Drive	1
IC201	AN217P	FM AM IF AMP	1
IC202	AN377	FM IF AMP and DET	1
IC301	μPC1161C	FM MAX and AM AMP	1
IC601,602	M5212L	Phono EQ Amp	2
IC701	STK461	Power Amp	1
IC801,802	NE646BN	Dolby	2
IC803,804	BA658M	FL Meter Drive	2
IC901	μPC7815H	AVR	1
IC902	μPC7815H	AVR	1
IC903	μPC78L08	AVR	1
IC904 ●	μPC7815H	AVR	1
DIODES			
D021	MA26W0	AOC	1
D022	2OA90	AOC	1
D101,102	LN222RP	Preset IND	2
D103,104	LN222RP	Preset IND	2
D105,106	LN222RP	Preset IND	2
D107	LN222RP	Preset IND	2
D108～114	LN07202P	Dial IND	1
D115	MA162A	AOC	1
D201	2OA90	AM Det	1
D202,203	2OA90	AM AGC	2
D204	2OA90	AM Rect	1
D205	MA27A2	AOC	1
D206	MA162A	Switching	1
D207	2OA90	Switching	1
D209	LN320GP	Tuning IND	1
D301	LN220RP	Stereo IND	1
D403	LN222RP	Tape IND	1
D404	LN422YP	Tape IND	1
D405	LN322GP	Tape IND	1
D406,407	2OA90	Rect	2
D408,409	2OA90	Rect	2
D410	MA26W0	AOC	1
D411	MA1068	AOC	1
D801	RD4R3EB	AOC	1
D802	VD1223	AOC	1
D803	LN217RP	Rec IND	1
D804	LN422YP	Dolby IND	1
D805 ● ⚠	SM112	Damper	1
D806,807	MA150	Rect	2
D808	RD4R3EB	AOC	1
D809	MA150	Switching	1
D810 ⚠	SM112	Switching	1
D851	MA162A	Rect	1
D852,853	MA162A	Switching	1
D854,855	MA162A	Switching	2
D857	MA162A	Switching	1
D901,902 ⚠	S3V20	Rect	2
D903,904 ⚠	S3V20	Rect	2
D905 ⚠	S2VB20F	Rect	1
D906 ⚠	SM112	Rect	1
D908	RD33EB2	Stabilizer	1
D911,912 ⚠	MA161	Rect	2
D913,914 ●	SM112	Switching	2
TH801,802	ERTD2FHK202S	Thermistor	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
LAMPS AND FUSES			
F901 ⚠	XBA2C20TR0	Fuse 250V 2A	1
F902 ⚠	XBA2C10TR0	Fuse 250V 1A	1
F903 ⚠	XBA2C12TR0	Fuse 250V 1.25 mA	1
F904 ⚠	XBA2C25TR0	Fuse 250V 2.5A	1
F905,906 ⚠	XBA2C50TR0	Fuse 250V 5A	2
PL1 ⚠	XAMR53X300	Lamp 14V 50 mA	1
PL2 ⚠	XAMR49K	Lamp 12.6V 150 mA	1
COILS AND TRANSFORMERS			
L101,102	RLQY30S1-O	Coil, RFC	2
L201,202	SLF6G42-O	MW, LW Ferrite Ant	1
L203	SLA3M6-M	Ant Coil, SW	1
L204	SLO2M6-M	OSC Coil, MW	1
L205	SLO1M8-M	OSC Coil, LW	1
L206	SLO3M2-M	OSC Coil, SW	1
L208	SLQX180-4M	Choke Coil	1
L401,402	SLQU222-2Y	Coil	2
L403,404	SLQV393-4M	Trap Coil	2
L801,802	SLM9Z10-M	Trap Coil	2
L803	SLQU270-2K	Coil, RFC	1
L804	SLO9Z10-K	Bias OSC Coil	1
L805	SLQU270-2K	Coil, RFC	1
T1 ⚠	SLT7C4-W	Power Trans	1
T201	SLI2M102-M	IFT, AM 1st	1
T202	RLI7V102-M	CFT, AM (except UK)	1
T202	SLI9W106P-M	CFT, AM (only UK)	1
T203	SLI2M202-M	IFT, AM 3rd	1
T204	SLI4D513-Z	FM Disc Coil	1
T801	SLT6E4	OSC Output Trans	1
CF201,202	SVF107MA53	CFT, FM	2
COMPONENT COMBINATIONS			
Z201	EXAF203Z471	C-R	1
Z301,302	SXAM505F	C-R	2
Z901,902	EXRFS203ZS	C-R	2
Z903	EXRFS203ZS	C-R	1
VARIABLE RESISTORS			
VR102,103	EWEU7A015B24	Preset 20kΩ B	2
VR104,105	EWEU7A015B24	Preset 20kΩ B	2

Ref. No.	Part No.	Description	Per Set (pcs.)
VR106,107	EWEU7A015B24	Preset 20kΩ B	2
VR108	EVLS3AA00B53	Preset 5kΩ B	1
VR109	EVLS3AA00B13	Preset 1kΩ B	1
VR110	EVLS3AA00B54	Preset 50kΩ B	1
VR201	EVLS3AA00B54	Preset 50kΩ B	1
VR301	EVLS3AA00B55	Preset 500kΩ B	1
VR302	EVTS3MA00B53	Preset 5kΩ B	1
VR401,402	EVLS3AA00B24	Preset 20kΩ B	2
VR403,404	EVH7XAF30B54	Volume 50kΩ B	2
VR405,406	EVLS3AA00B14	Preset 10kΩ B	2
VR409,410	EVLS3AA00B54	Preset 50kΩ B	2
VR411,412	EVLS3AA00B14	Preset 10kΩ B	2
VR501,502	EWKK7A091BF5	Volume 250kΩ B	1
VR503	EVHFDA505G25	Balance 200kΩ G	1
VR504,505	EWKEUA091C15	Treble 100kΩ C	1
VR506,507	EWKEUA091C15	Bass 100kΩ C	1
VR801	EVLS3AA00B13	Preset 1kΩ B	1
VR802,803	EVLS3AA00B14	Preset 10kΩ B	2
VR901	EVLS3AA00B52	Preset 500kΩ B	1
VARIABLE CAPACITORS			
CV201,202 (VR101)	SCVCE21W114	Variable Capacitor with Volume	1
CT201	SCVCTY115D	Trimmer	1
CT202	SCVCTY115D	Trimmer	1
CT203	SCVCTY115D	Trimmer	1
CT204,205	SCVCTY211D31	Trimmer	1
CT206	SCVCTY115D	Trimmer	1
SWITCHES			
S1 ⚠	ESE37205	Power Voltage	1
S101~107, 805	SSH710	Preset	1
S401~403, 801,803	SSH514	Tape Selector/Dolby/ VU Peak	1
S404	SSH66	Rec Mute	1
S501,502	SSH266	Loudness, Tape Monitor	1
S701,702	SSH228	Speaker Selector	2
S802	SSS94	Whistle Defeat	1
S901 ⚠	SSH88	Power	1
ST1~14	ESD81548	Rec/Play Selector	1
SF1~7, 804	SSH712	Function	1

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
		TUNER	
	SSD5004	Tuner	1
		METER	
M1	QSLS002RF	Fluorescent	1
		OTHERS	
1	SQX50090	Instruction Book (for Norway, Denmark, Sweden, Finland)	1
1	SQX50148	Instruction Book (except UK, Norway, Denmark, Sweden, Finland)	1
1	SQX50092	Instruction Book (only UK)	1
2	SPT1HCZNRAZ1	Demonstration Tape (except UK)	1
3	OL340	Silicon Oil	1
4	AD1600	Adhesives	1
5	SZOGM0380	Grease (for player)	1
6	SJP9206	Plug, FM ANT (only UK)	1
		PACKINGS	
PC1	SPN3782	Carton Box	1
PC2	SPN3784	Pad	1
PC3	SPN3804	Pad, Dust Cover	1
PC4	XZB92X63C05	Poly Cover	1

Numbering System of Resistor

Type	Wattage	Tolerance	Value
Three Letters	One or Two Letters	Two or Three Letters	Three or Four Letters

Example:

E R D 2 5 T J 1 0 1

Resistor Type	Tolerance
ERD: Carbon Film	F: ±1%
ERC: Solid	J: ±5%
ERX: Metal Film	K: ±10%
ERG: Metal Oxide Film	
ERO: High Stability Metal Film	
ERF: Flameproof Wire-Wound Bath-Tube	
ERQ: Fuse Type Metal Film	

Ref. No.	Part No.	Description	Per Set (pcs.)
		RESISTORS	
R021	ERD25TJ273	27kΩ 1/4W	1
R022	ERD25TJ154	150kΩ 1/4W	1
R023	ERD25TJ223	22kΩ 1/4W	1
R024	ERD25TJ272	2.7kΩ 1/4W	1
R025,026	ERD25TJ562	5.6kΩ 1/4W	1
R027	ERD25TJ103	10kΩ 1/4W	1
R028	ERD25TJ333	33kΩ 1/4W	1
R029	ERD25TJ330	33Ω 1/4W	1
R030	ERD25TJ273	27kΩ 1/4W	1
R031	ERD25TJ122	1.2kΩ 1/4W	1
R032	ERD25TJ221	220Ω 1/4W	1
R033,034	ERD25TJ103	10kΩ 1/4W	2
R035	ERD25TJ330	33Ω 1/4W	1
R036	ERD25TJ103	10kΩ 1/4W	1
R101	ERG1ANJ101	100Ω 1W	1
R102,103	ERD25TJ104	100kΩ 1/4W	2
R104	ERD25TJ821	820Ω 1/4W	1
R105	ERD25TJ154	150kΩ 1/4W	1
R106	ERD25TJ562	5.6kΩ 1/4W	1
R107,108	ERD25TJ682	6.8kΩ 1/4W	2
R109	ERD25TJ682	6.8kΩ 1/4W	1
R110,111	ERD25TJ683	68kΩ 1/4W	2
R112	ERD25TJ332	3.3kΩ 1/4W	1
R113	ERD25TJ473	47kΩ 1/4W	1
R115	ERD25TJ152	1.5kΩ 1/4W	1
R201,202	ERD25TJ103	10kΩ 1/4W	2
R203	ERD25TJ332	3.3kΩ 1/4W	1
R204,205	ERD25TJ330	33Ω 1/4W	2
R206	ERD25TJ471	470Ω 1/4W	1
R207	ERD25TJ331	330Ω 1/4W	1
R208	ERD25TJ153	15kΩ 1/4W	1
R209	ERD25TJ122	1.2kΩ 1/4W	1
R210	ERD25TJ102	1kΩ 1/4W	1

REPLACEMENT PARTS LIST

Ref. No.	PartNo.	Description	Per Set (pcs.)
R211	ERD25TJ152	1.5kΩ 1/4W	1
R212	ERD25TJ332	3.3kΩ 1/4W	1
R213	ERD25TJ471	470Ω 1/4W	1
R214	ERD25TJ103	10kΩ 1/4W	1
R215	ERD25TJ102	1kΩ 1/4W	1
R216	ERD25TJ474	470kΩ 1/4W	1
R217	ERD25TJ333	33kΩ 1/4W	1
R218	ERD25TJ331	330Ω 1/4W	1
R219,220	ERD25TJ333	33kΩ 1/4W	2
R221	ERD25TJ103	10kΩ 1/4W	1
R222	ERD25TJ224	220kΩ 1/4W	1
R223	ERD25TJ104	100kΩ 1/4W	1
R224	ERD25TJ473	47kΩ 1/4W	1
R226	ERD25TJ224	220kΩ 1/4W	1
R227	ERD25TJ103	10kΩ 1/4W	1
R228	ERD25TJ221	220Ω 1/4W	1
R229 ⚠	ERG1ANJ151	150Ω 1W	1
R230	ERD25TJ274	270kΩ 1/4W	1
R231	ERD25TJ472	4.7kΩ 1/4W	1
R232	ERD25TJ822T	8.2kΩ 1/4W	1
R233	ERD25TJ103	10kΩ 1/4W	1
R234	ERD25TJ332	3.3kΩ 1/4W	1
R235	ERD25TJ222	2.2kΩ 1/4W	1
R236	ERD25TJ473	47kΩ 1/4W	1
R237,238	ERD25TJ222	2.2kΩ 1/4W	2
R239	ERD25TJ274	270kΩ 1/4W	1
R240,241	ERD25TJ103	10kΩ 1/4W	2
R246	ERD25TJ220	22Ω 1/4W	1
R247	ERD25TJ472	4.7kΩ 1/4W	1
R248	ERD25TJ102	1kΩ 1/4W	1
R249	ERD25TJ471	470Ω 1/4W	1
R250	ERD25TJ331	330Ω 1/4W	1
R251	ERD25TJ680	68Ω 1/4W	1
R252	ERD25TJ332	3.3kΩ 1/4W	1
R253	ERD25TJ682	6.8kΩ 1/4W	1
R254	ERD25TJ102	1kΩ 1/4W	1
R301	ERD50TJ221	220Ω 1/4W	1
R302	ERD25TJ473	47kΩ 1/4W	1
R303	ERD25TJ153	15kΩ 1/4W	1
R305	ERD25TJ153	15kΩ 1/4W	1
R306	ERD25TJ102	1kΩ 1/4W	1
R307,308	ERD25TJ223	22kΩ 1/4W	2
R309,310	ERD25TJ103	10kΩ 1/4W	2
R311,312	ERD25TJ473	47kΩ 1/4W	2
R313,314	ERD25TJ102	1kΩ 1/4W	2
R315,316	ERD25TJ153	15kΩ 1/4W	2
R319	ERD25TJ224	220kΩ 1/4W	1
R401,402	ERD25TJ100	10Ω 1/4W	2
R403,404	ERD25TJ101	100Ω 1/4W	2
R405,406	ERD25TJ104	100kΩ 1/4W	2
R407,408	ERD25TJ224	220kΩ 1/4W	2
R409,410	ERD25TJ102	1kΩ 1/4W	2
R411,412	ERD25TJ103	10kΩ 1/4W	2
R413,414	ERD25TJ154	150kΩ 1/4W	2

Ref. No.	Part No.	Description	Per Set (pcs.)
R415,416	ERD25TJ123	12kΩ 1/4W	2
R417,418	ERD25TJ822T	8.2kΩ 1/4W	2
R419,420	ERD25TJ223	22kΩ 1/4W	2
R421	ERD25TJ331	330Ω 1/4W	1
R422	ERD25TJ223	22kΩ 1/4W	1
R423,424	ERD25TJ123	12kΩ 1/4W	2
R425,426	ERD25TJ332	3.3kΩ 1/4W	2
R427,428	ERD25TJ332	3.3kΩ 1/4W	2
R429,430	ERD25TJ334	330kΩ 1/4W	2
R431,432	ERD25TJ102	1kΩ 1/4W	2
R433,434	ERD25TJ471	470Ω 1/4W	2
R435,436	ERD25TJ152	1.5kΩ 1/4W	2
R437,438	ERD25TJ681	680Ω 1/4W	2
R439,440	ERD25TJ390	39Ω 1/4W	2
R441,442	ERD25TJ151	150Ω 1/4W	2
R443,444	ERD25TJ103	10kΩ 1/4W	2
R445,446	ERD25TJ472	4.7kΩ 1/4W	2
R455,456	ERD25TJ123	12kΩ 1/4W	2
R457,458	ERD25TJ223	22kΩ 1/4W	2
R459 ⚠	ERQ12HJ330	33Ω 1/2W	1
R461,462	ERD25TJ823	82kΩ 1/4W	2
R463,464	ERD25TJ333	33kΩ 1/4W	2
R465,466	ERD25TJ152	1.5kΩ 1/4W	2
R467,468	ERD25TJ471	470Ω 1/4W	2
R469,470	ERD25TJ104	100kΩ 1/4W	2
R471,472	ERD25TJ823	82kΩ 1/4W	2
R473,474	ERD25TJ330	33Ω 1/4W	2
R475,476	ERD25TJ222	2.2kΩ 1/4W	2
R477	ERD25TJ222	2.2kΩ 1/4W	1
R478	ERD25TJ182	1.8kΩ 1/4W	1
R479	ERD25TJ681	680Ω 1/4W	1
R480	ERD25TJ472	4.7kΩ 1/4W	1
R481	ERD25TJ102	1kΩ 1/4W	1
R482	ERD25TJ122	1.2kΩ 1/4W	1
R483,484	ERD25TJ473	47kΩ 1/4W	2
R501,502	ERD25TJ332	3.3kΩ 1/4W	2
R503,504	ERD25TJ333	33kΩ 1/4W	2
R505,506	ERD25TJ104	100kΩ 1/4W	2
R507,508	ERD25TJ471	470Ω 1/4W	2
R509,510	ERD25TJ152	1.5kΩ 1/4W	2
R511,512	ERD25TJ682	6.8kΩ 1/4W	2
R513,514	ERD25TJ103	10kΩ 1/4W	2
R515,516	ERD25TJ274	270kΩ 1/4W	2
R517,518	ERD25TJ104	100kΩ 1/4W	2
R601,602	ERD25TJ222	2.2kΩ 1/4W	2
R603,604	ERD25TJ474	470kΩ 1/4W	2
R605,606	ERD25TJ331	330Ω 1/4W	2
R607,608	ERD25TJ154	150kΩ 1/4W	2
R609,610	ERD25TJ154	150kΩ 1/4W	2
R611,612	ERD25TJ123	12kΩ 1/4W	2
R613,614	ERD25TJ473	47kΩ 1/4W	2
R615 ⚠	ERQ12HJ101	100Ω 1/2W	1
R616,617	ERD25TJ823	82kΩ 1/4W	2
R701,702	ERD25TJ102	1kΩ 1/4W	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description		Per Set (pcs.)
R703,704	ERD25TJ333	33kΩ	1/4W	2
R705,706	ERD25TJ332	3.3kΩ	1/4W	2
R707,708	ERD25TJ472	4.7kΩ	1/4W	2
R709,710	ERD25TJ153	15kΩ	1/4W	2
R711,712	ERD25TJ183	18kΩ	1/4W	2
R713,714	ERD25TJ332	3.3kΩ	1/4W	2
R715,716	ERD25TJ102	1kΩ	1/4W	2
R717,718	ERD25TJ153	15kΩ	1/4W	2
R719,720 ⚠	ERX2ANJ220	22Ω	2W	2
R721 ⚠	ERQ12HJ101	100Ω	1/2W	1
R722,723	ERD50TJ331	330Ω	1/4W	2
R801	ERD25TJ152	1.5kΩ	1/4W	1
R802	ERD25TJ182	1.8kΩ	1/4W	1
R803	ERD25TJ472	4.7kΩ	1/4W	1
R804	ERD25TJ222	2.2kΩ	1/4W	1
R805	ERD25TJ471	470Ω	1/4W	1
R806	ERD25TJ271	270Ω	1/4W	1
R807	ERD25TJ221	220Ω	1/4W	1
R808	ERD25TJ222	2.2kΩ	1/4W	1
R809	ERD25TJ220	2.2Ω	1/4W	1
R810	ERD25TJ222	2.2kΩ	1/4W	1
R811,812	ERD25TJ102	1kΩ	1/4W	2
R813,814	ERO25CKF3301	3.3kΩ	1/4W	2
R815,816	ERD25TJ473	47kΩ	1/4W	2
R817,818	ERD25TJ104	100kΩ	1/4W	2
R819,820	ERD25TJ104	100kΩ	1/4W	2
R821,822	ERD25TJ181	180kΩ	1/4W	2
R823,824	ERD25TJ105	1MΩ	1/4W	2
R825,826	ERD25TJ274	270kΩ	1/4W	2
R827,828	ERD25TJ102	1kΩ	1/4W	2
R829,830	ERD25TJ102	1kΩ	1/4W	2
R831,832	ERD25TJ823	82kΩ	1/4W	2
R833	ERD25TJ101	100Ω	1/4W	1
R834 ⚠	ERG2ANJ680	68Ω	2W	1
R835	ERD25TJ104	100kΩ	1/4W	1
R836	ERD25TJ472	4.7kΩ	1/4W	1
R837	ERD25TJ332	3.3kΩ	1/4W	1
R838,839	ERD25TJ333	33kΩ	1/4W	2
R840	ERD25TJ472	4.7kΩ	1/4W	1
R841	ERQ12HJ330	33Ω	1/2W	1
R842	ERD25TJ102	1kΩ	1/4W	1
R843	ERD25TJ331	330Ω	1/4W	1
R844	ERD25TJ332	3.3kΩ	1/4W	1
R845	ERD25TJ472	4.7kΩ	1/4W	1
R846	ERD25TJ102	1kΩ	1/4W	1
R847	ERD25TJ103	10kΩ	1/4W	1
R851	ERD25TJ333	33kΩ	1/4W	1
R852	ERD25TJ103	10kΩ	1/4W	1
R853	ERD25TJ334	330kΩ	1/4W	1
R854	ERD25TJ223	22kΩ	1/4W	1
R855	ERD25TJ103	10kΩ	1/4W	1
R856,857	ERD25TJ222	2.2kΩ	1/4W	2
R858	ERD25TJ223	22kΩ	1/4W	1
R859	ERD25TJ104	100kΩ	1/4W	1

Ref. No.	Part No.	Description		Per Set (pcs.)
R860	ERD25TJ222	2.2kΩ	1/4W	1
R861	ERD25TJ473	47kΩ	1/4W	1
R862	ERD25TJ683	68kΩ	1/4W	1
R863	ERD25TJ222	2.2kΩ	1/4W	1
R864,865	ERD25TJ682	6.8kΩ	1/4W	2
R867	ERD25TJ222	2.2kΩ	1/4W	1
R869	ERD25TJ223	22kΩ	1/4W	1
R902	ERD25TJ472	4.7kΩ	1/4W	1
R903	ERQ12HJ220	22Ω	1/2W	1
R904	ERD25TJ182	1.8kΩ	1/4W	1
R905 ⚠	ERG2ANJ820	82Ω	2W	1
R908	ERD25TJ102	1kΩ	1/4W	1
R909	ERD25TJ681	680Ω	1/4W	1
R910	ERD25TJ103	10kΩ	1/4W	1
R915	ERD25TJ222	2.2kΩ	1/4W	1
R917 ⚠	ERX3ANJ221	220kΩ	3W	1
R918 ⚠	ERG1ANJ180	18Ω	1W	1
R919	ERD25TJ102	1kΩ	1/4W	1
R920 ⚠	ERQ2CJ5R6	5.6Ω	2W	1
	(Except Serial No. 94050-001001 to 975050-003520 for UK.)			

REPLACEMENT PARTS LIST

Numbering System of Capacitor

Type	Voltage	Value	Tolerance
Four Letters	One or Two Letters	Two to Five Letters	One or Two Letters

Example:

E C K D 1 H 3 3 3 M D

Capacitor Type	Tolerance
ECCD: Temperature Compensating Ceramic	C: ±0.25pF
ECKD: High Dielectric Constant Ceramic	D: ±0.5pF
ECQM: Polyester	F: ±1pF
ECQS: Polystyrene Film	J: ±5%
ECQP: Polypropylene Film	K: ±10%
ECFD: Semiconductor Ceramic	M: ±20%
ECEA: Electrolytic	P: +100, −0%
ECEB: Electrolytic	Z: +80, −20%
ECET: Electrolytic	
ECSF: Tantalum	

Ref. No.	Part No.	Description		Per Set (pcs.)
CAPACITORS				
C021	ECEA50Z1	1μF	50V	1
C022	ECSF35ER47T	0.47μF	35V	1
C023	ECEA25M10R	10μF	25V	1
C024	ECEA1HS100	10μF	50V	1
C025	ECEA25Z4R7	4.7μF	25V	1
C101	ECEA1ES470	47μF	25V	1
C102,103	ECKD1H103ZF	0.01μF	50V	2
C104	ECEA50Z3R3	3.3μF	50V	1
C105,106	ECKD1H103ZF	0.01μF	50V	2
C108	ECKD1H223ZF	0.022μF	50V	1
C203	ECCD1H330K	33pF	50V	1
C204	ECFD1E103MD	0.01μF	25V	1
C205	ECKD1H331KB	330pF	50V	1
C206	ECKD1H102KB	0.001μF	50V	
C207	ECKD1H101KB	100pF	50V	1
C208,209	ECFD1E103MD	0.01μF	25V	2
C210	ECFD1E103MD	0.01μF	25V	1
C211	ECQS1471JZ	470pF	125V	1
C212	ECCD1H150K	15pF	50V	1
C213	ECCD1H820J	82pF	50V	1
C214	ECQS1221JZ	220pF	125V	1
C215	ECCD1H180K	18pF	50V	1
C216	ECEA1AS101	100μF	10V	1
C217	ECQS1152JZ	1500pF	125V	1
C218	ECFD1E473MD	0.047μF	25V	1
C219	ECKD1H103ZF	0.01μF	50V	1
C220	ECCD1H270K	27pF	50V	1
C221,222	ECFD1E223MD	0.022μF	25V	2
C223	ECEA50Z3R3	3.3μF	50V	1
C224	ECFD1E103MD	0.01μF	25V	1

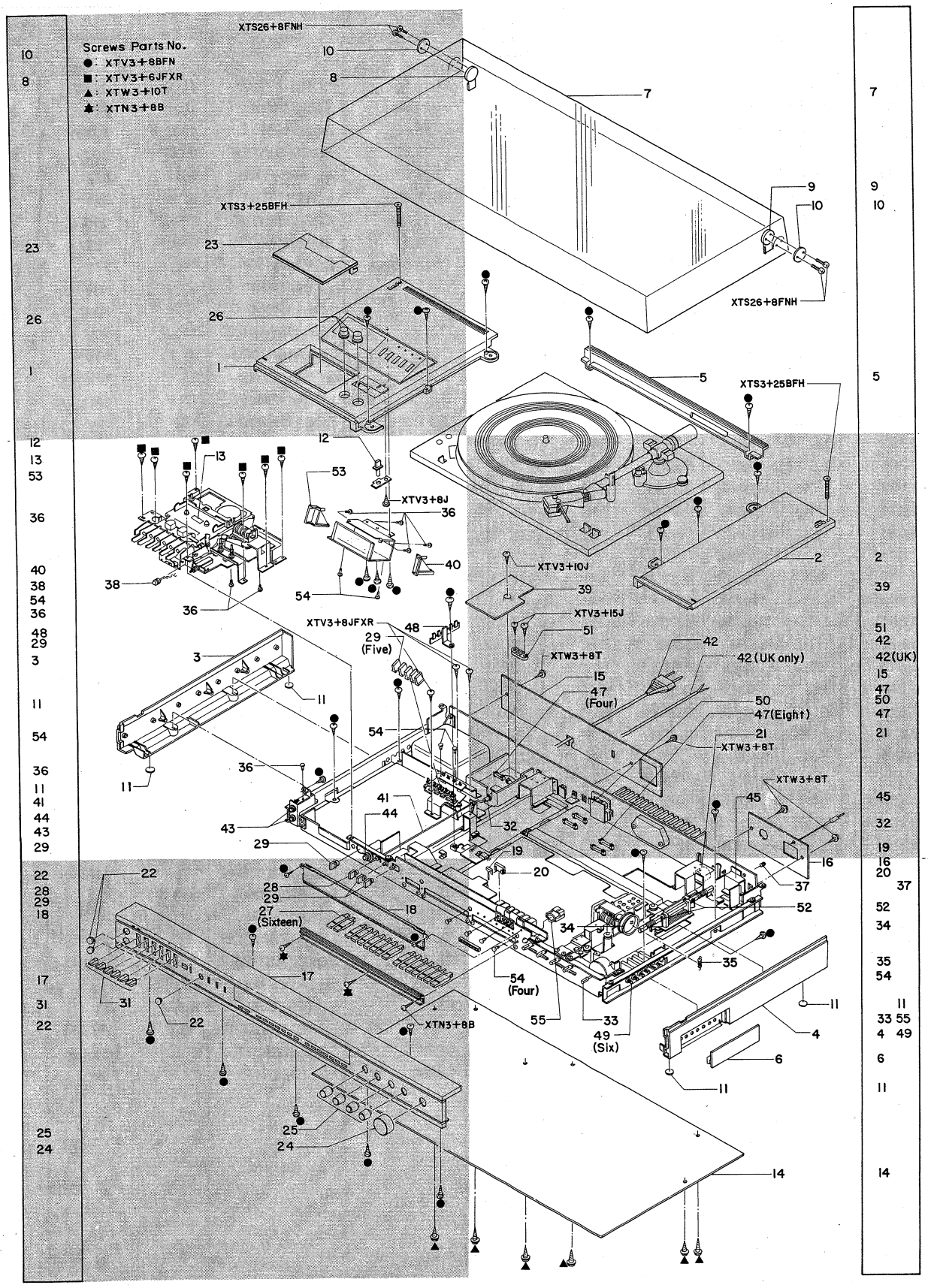
Ref. No.	PartNo.	Description		Per Set (pcs.)
C225	ECFD1E223MD	0.022μF	25V	1
C226	ECKD1H223ZF	0.022μF	50V	1
C227	ECFD1E473MD	0.047μF	25V	1
C228	ECEA50Z3R3	3.3μF	50V	1
C229	ECFD1E223MD	0.022μF	25V	1
C230	ECCD1H470K	47pF	50V	1
C231	ECSF35ER1T	0.1μF	35V	1
C232	ECKD1H223ZF	0.022μF	50V	1
C233	ECKD1H103ZF	0.033μF	50V	1
C234	ECFD1E103MD	0.01μF	25V	1
C235	ECFD1E333MD	0.033μF	25V	1
C236	ECFD1E103MD	0.01μF	25V	1
C237	ECEA1HS100	10μF	50V	1
C238	ECKD1H103ZF	0.01μF	50V	1
C239	ECEA25Z4R7	4.7μF	25V	1
C240	ECCD1H680K	68pF	50V	1
C242	ECKD1H103ZF	0.01μF	50V	1
C243	ECEA50Z1	1μF	50V	1
C244	ECKD1H103ZF	0.01μF	50V	1
C245	ECKD1H223ZF	0.022μF	50V	1
C248,249	ECEA1HS100	10μF	50V	2
C250	ECCD1H220K	22pF	50V	1
C251	ECKD1H101KB	100pF	50V	1
C252	ECKD1H472KB	0.0047μF	50V	1
C253	ECQS1472JZ	4700μF	125V	1
C254	ECKD1H103ZF	0.01μF	50V	1
C255	ECEA1HS100	10μF	50V	1
C258	ECKD1H222KB	0.0022μF	50V	1
C261,262	ECKD1H103ZF	0.01μF	50V	2
C263	ECCD1H070D	7pF	50V	1
C264,265	ECKD1H223ZF	0.022μF	50V	2
C268	ECEA1ES470	47μF	25V	1
C269,270	ECKD1H223ZF	0.022μF	50V	2
C301	ECEA1HS100	10μF	50V	1
C302	ECEA1CS221	220μF	16V	1
C304	ECFD1E473MD	0.047μF	25V	1
C305	ECQS1471JZ	470pF	125V	1
C306	ECEA50M1R5R	1.5μF	50V	1
C307	ECEA50M3R3R	3.3μF	50V	1
C308	ECSF35ER22T	0.22μF	35V	1
C309,310	ECEA1HS100	10μF	50V	2
C311,312	ECKD1H331KB	330pF	50V	2
C313,314	ECEA50Z1	1μF	50V	2
C401,402	ECQS1471JZ	470pF	125V	2
C403,404	ECEA50M4R7R	4.7μF	50V	2
C405,406	ECKD1H102ZF	0.001μF	50V	2
C407,408	ECEA1HS100	10μF	50V	2
C409,410	ECEA1HS100	10μF	50V	2
C411,412	ECQM1H153KZ	0.015μF	50V	2
C413,414	ECKD1H102KB	0.001μF	50V	2
C415	ECEA1CS221	220μF	16V	1
C416	ECEA1AS101	100μF	50V	1
C417,418	ECQM1H332MZ	0.0033μF	50V	2
C419,420	ECSF35ER68T	0.68μF	35V	2

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (pcs.)
C421,422	ECSF35EE1T	1μF 35V	2
C423,424	ECSF35ER1T	0.1μF 35V	2
C425,426	ECQM1H393MZ	0.039μF 50V	2
C427,428	ECSF35ER22T	0.22μF 35V	2
C429,430	ECSF35ER22T	0.22μF 35V	2
C431,432	ECQM1H473MZ	0.047μF 50V	2
C433,434	ECQM1H103MZ	0.01μF 50V	2
C435,436	ECEA1HS100	10μF 50V	2
C437,438	ECKD1H472KB	0.0047μF 50V	2
C439	ECEA1HS100	10μF 50V	1
C440	ECEA1HS100	10μF 50V	1
C445	ECEA1ES101	100μF 25V	1
C446	ECEA1CS221	220μF 16V	1
C447,448	ECSF35ER33T	0.33μF 35V	2
C449,450	ECQM1H104MZ	0.1μF 50V	2
C451,452	ECEA1HS100	10μF 50V	2
C453,454	ECEA1HS100	10μF 50V	2
C457,458	ECCD1H330K	33pF 50V	2
C501,502	ECFD1E333MD	0.033μF 25V	2
C503,504	ECFD1E153MD	0.015μF 25V	2
C505,506	ECKD1H152KB	0.0015μF 50V	2
C507,508	ECQM1H154MZ	0.15μF 50V	2
C509,510	ECQM1H183MZ	0.018μF 50V	2
C601,602	ECKD1H101KB	100pF 50V	2
C603,604	ECEA50M4R7R	4.7μF 50V	2
C605,606	ECCD1H330K	33pF 50V	2
C607,608	ECKD1H102KB	0.001μF 50V	2
C609,610	ECFD1E223MD	0.022μF 25V	2
C611,612	ECKD1H682KB	0.0068μF 50V	2
C613,614	ECSF35ER47T	0.47μF 35V	2
C615,616	ECEA1AS470	47μF 10V	2
C617	ECEA1VS101	100μF 35V	1
C701,702	ECKD1H101KB	100pF 50V	2
C703,704	ECSF35E1T	1μF 35V	2
C705,706	ECKD1H471KB	470μF 50V	2
C707,708	ECCD1H100F	10pF 50V	2
C709,710	ECEA1AS470	47μF 10V	2
C711,712	ECEA1AS470	47μF 10V	2
C713,714	ECEA1HS470	47μF 50V	2
C715	ECEA1VS101	100μF 35V	1
C716,717	ECEA1HS100	10μF 50V	2
C718,719	ECQM1H473MZ	0.047μF 50V	2
C801,802	ECSF35ER1T	0.1μF 35V	2
C803	ECQS1182JZ	1800pF 125V	1
C804	ECQS1471JZ	470pF 125V	1
C805	ECEA1HS100	10μF 50V	1
C806	ECQM1H104KZ	0.1μF 50V	1
C807	ECQM1H683MZ	0.068μF 50V	1
C808	ECQM1H333MZ	0.033μF 50V	1
C809,810	ECKD1H331KB	330pF 50V	2
C811,812	ECSF35ER68T	0.68μF 35V	2
C813,814	ECEA1HS100	10μF 50V	2
C815,816	ECEA1HS100	10μF 50V	2
C817,818	ECQP1273FZ	0.027μF 100V	2

Ref. No.	Part No.	Description	Per Set (pcs.)
C819,820	ECQS1472JZ	4700pF 125V	2
C821,822	ECEA1HS100	10μF 50V	2
C823,824	ECQS1562JZ	5600pF 125V	2
C825,826	ECQM1H473JZ	0.047μF 50V	2
C827,828	ECEA1HS100	10μF 50V	2
C829,830	ECSF35ER1T	0.1μF 35V	2
C831,832	ECSF35ER33T	0.33μF 35V	2
C833,834	ECEA1AS221	220μF 10V	2
C835,836	ECEA1ES101	100μF 25V	2
C837	ECEA1CS471	470μF 16V	1
C838	ECEA1HS100	10μF 50V	1
C839	ECEA1ES101	100μF 25V	1
C840	ECEA16N47	47μF 16V	1
C841	ECEA1CS330	33μF 16V	1
C845 ●	ECEA1AS470	47μF 10V	1
C851,852	ECEA1AS470	47μF 10V	2
C853	ECEA50Z1	1μF 50V	1
C854	ECEA25N10	10μF 25V	1
C855	ECKD1H102KB	0.001μF 50V	1
C856	ECEA1ES4R7	4.7μF 25V	1
C901,902 ⚠	ECKDHS101MB	100pF 400V (except UK)	2
C903 ⚠	ECKDGS101MB4	100pF 400V (only UK)	1
C904	ECKD1H223ZF	0.022μF 50V	1
C906,907	ECKD1H103ZF	0.01μF 50V	2
C908,909	ECKD1H103ZF	0.01μF 50V	2
C910	ECQM1H334MZ	0.33μF 50V	1
C911,912	ECET35R332	3300μF 35V	2
C913	ECET35R222	2200μF 35V	1
C914	ECET50R332	3300μF 35V	1
C915	ECSF35ER33T	0.33μF 35V	1
C916	ECSF35ER1T	0.1μF 35V	1
C917	ECEA1HS101	100μF 50V	1
C918	ECKD1H102KB	0.001μF 50V	1
C919	ECEA1VS101	100μF 35V	1
C920	ECSF35ER33T	0.33μF 35V	1
C921	ECEA1CS471	470μF 16V	1
C922,923	ECEA1ES470	47μF 25V	2
C924	ECKD1H223ZF	0.022μF 50V	1
C925	ECEA1VS221	220μF 35V	1
C926	ECEA1CS102	100μF 16V	1
C927 ●	ECKD1H223ZF	0.022μF 50V	1
C928 ●	ECSF35ER33T	0.33μF 35V	1
C929 ●	ECSF35ER1T	0.1μF 35V	1

PARTS LOCATION OF CABINET AND CHASSIS



REPLACEMENT PARTS LIST OF CABINET AND CHASSIS

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SYK1698	Cabinet Left Ass'y	1
2	SKM6180	Cabinet, Right	1
3	SKM6040	Cabinet Side, Left	1
4	SKM6021	Cabinet Side, Right	1
5	SKM6200	Cabinet, Rear	1
6	SYE674	Volume Lid Ass'y	1
7	SGE1052	Dust Cover	1
8	SBH9036-1	Hinge, Left	1
9	SBH9038-1	Hinge, Right	1
10	SBH9040-1	Cap	2
11	SHS3018	Felt	4
12	SBC190-4	Button, Reset	1
13	SDH94-2	Reflection Plate	1
14	SYU388	Bottom Board	1
15	SKU4180	Rear Board, Left	1
15	SKU4181	Rear Board, Left (only UK)	1
16	SKU4201	Rear Board, Right	1
17	SYP432	Escutcheon Ass'y	1
18	SKD4620	Dial Scale	1
18	SKD4623	Dial Scale (only UK)	1
19	SDP5044	Dial Pointer	1
20	SDA62	Holder, Dial Pointer	1
21	SJF9102	Terminal, DIN 5P	1
22	SUV122-1	Cover, Headphone Jack	3
23	SYE696	Cassette Lid	1
24	SBN962	Knob, Tuning	1
25	SBN952	Knob, Volume	4
26	SBN922	Knob, Rec	2
27	SBC370	Button, Function	16
28	SBC372	Button, Power	1
29	SBC374	Button A	8
31	SBC378	Button, Cassette	6
32	SBC226	Button C	1
33	SDT93002	Tuning Shaft	1
34	RDD323ZA	Dial Drum	1
35	RDS3090A	Spring	1
36	RHR969ZA	Latch A	10
37	RHG3-1	Rubber, Antenna	1
38	SHG958	Rubber, Lamp	1
39	SMX202	Insulator Cover	1
40	SMP144	Holder A, Meter	1
41	SUH68-1	Remote Rod	1
42 ⚠	SJA88	Power Cord	1
42 ⚠	SJA116	Power Cord (only UK)	1
43	XCJ6P21A	Jack, Microphone	2
44	XCJ6P21F	Jack, Headphone	1
45	SJS9408	Terminal, DIN Ant.	1
47	SJF110	Fuse Holder	12
48	SJR402	Terminal Board	1
49	NBE502	Knob	6
50	SJF9408	Terminal, Speaker	1
51	SHR134	Power Cord Clamp	1

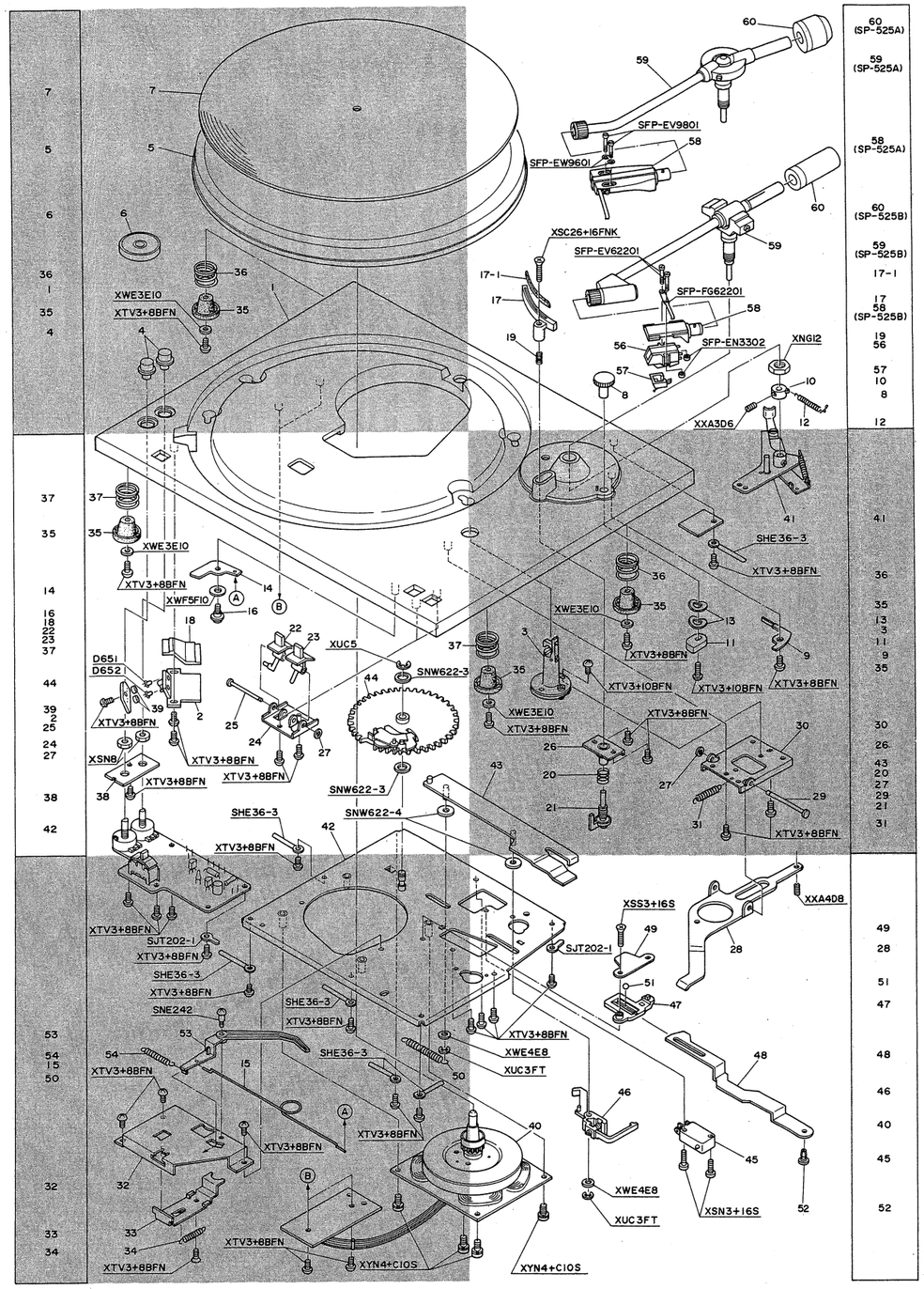
Ref. No.	PartNo.	Description	Per Set (pcs.)
52	RHG109	Rubber, Antenna	2
53	SMP146	Holder B, Meter	1
54	SHR9112	Latch B	9
55	RJS205ZA	Socket, Lamp	1

REPLACEMENT PARTS LIST OF RECORD PLAYER (SP521A)

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SJY236	Player Board Assembly	1
2	SJY9640	Holder, Strobo	1
3	SJY232	Arm Rest Assembly	1
4	SBN922-1	Knob, Speed Selector	2
5	SJY3024	Turntable	1
6	SGE263	45 r.p.m. Adaptor	1
7	SJY4032-2	Turntable Mat	1
8	SJY5154	Knob, Skate	1
9	SJY9616-1	Skate Lever	1
10	SJY9636-2	Antiskate Coller	1
11	SJY9638	Antiskate Cam	1
12	SJY9688-1	Antiskate Spring	1
13	SFXW831-5	Washer	2
14	SJY9614	Cut Lever	1
15	SJY9686-1	Spring Stop	1
16	SJY9346	Screw, Cut Plate	1
17	SJY210	Lift Assembly	1
17-1	(SJY9680)	Rubber,Lift	(1)
18	SJY9694	Strobo Cover	1
19	SJY9228	Spring, Lift A	1
20	SJY9532	Spring, Lift B	1
21	SJY5144	Shaft Lift	1
22	SJY256	Lever Assembly, Stop	1
23	SJY258	Lever Assembly, Cueing	1
24	SJY9682	Bracket, Lever	1
25	SJY9676	Shaft B	1
26	SJY208-1	Cylinder Assembly	1
27	SNE468	Washer, Speed	2
28	SJY9670-1	Cueing Arm	1
29	SJY9674	Shaft A	1
30	SJY9696	Holder, Tone Arm Rest	1
31	SJY9222-1	Spring, Tone Arm Rest	1
32	SJY9672	Bracket, Lever	1
33	SJY9624	Lever, Reset	1
34	SJY9064	Spring, Rest	1
35	SJY9244	Rubber, Cushion	4
36	SJY9714-1	Spring A	2
37	SJY9716-1	Spring B	2
38	SMN1188	Holder, Variable Resistor	1
39	SJY5162	Spacer, Strobo	2
40	DFX5000	DD Motor Assembly with Pulley	1
41	SJY246	Restor Lever Assembly	1
42	SJY238	Base Plate Assembly	1
43	SJY240	Slide Arm Assembly	1
44	SJY242	Gear Mecha Assembly	1
45	AH75503	Micro Switch	1
46	SJY244	Lever Assembly	1
47	SJY9698	T.S Holder	1
48	SJY9700	Trip Lever	1
49	SJY9702	Plate	1
50	SJY9704	Slide Arm Spring	1
51	SJY9610	Steel Ball	1
52	SJY9706	Push Pin	1
53	SJY9708	Reject Arm	1
54	SJY9710	Reject Arm Spring	1
55	EPU614SMGD	Tone Arm Assembly with Weight, Cartidge and Stylus	1
56	EPC270C-X	Cartridge with Stylus	1
57	EPS270SD	Stylus	1
58	SJY100-2	Head Shell Assembly	1
59	SJY104-2	Tone Arm Assembly without Weight	1
60	SJY102-2	Balance Weight Assembly	1

Ref. No.	Part No.	Description	Per Set (pcs.)
TRANSISTORS			
Q651	2SC828	Transistor	1
Q652	2SC1317	Transistor	1
DIODES			
D651,652	BR5505S	LED	2
LAMPS			
PL1	XAMR51×400	12.6V 50mA	1
VARIABLE RESISTORS			
VR651,652	EWHG5AF20B53	Speed Adjust 5kΩ B	2
SWITCHES			
S651	SSL52	Speed Selector	1
RESISTORS			
R651	ERD25TJ682	6.8kΩ 1/4W	1
R652	ERD25TJ332	3.3kΩ 1/4W	1
R653	ERD25TJ152	1.5kΩ 1/4W	1
R654	ERD25TJ332	3.3kΩ 1/4W	1
R655	ERD25TJ470	47Ω 1/4W	1
R656 ⚠	ERQ12HJ220	22Ω 1/2W	1
R657 ⚠	ERG1ANJ101	100Ω 1W	1
CAPACITORS			
C651	ECSF35ER22T	0.22μF 35V	1
C652	ECEA1CS221	220μF 16V	1
OTHERS			
1	AD1600	Adhesives	1
2	KF96H300KCS	Silicon Oil	1

EXPLODED VIEW OF RECORD PLAYER (SP521A, SP521B)

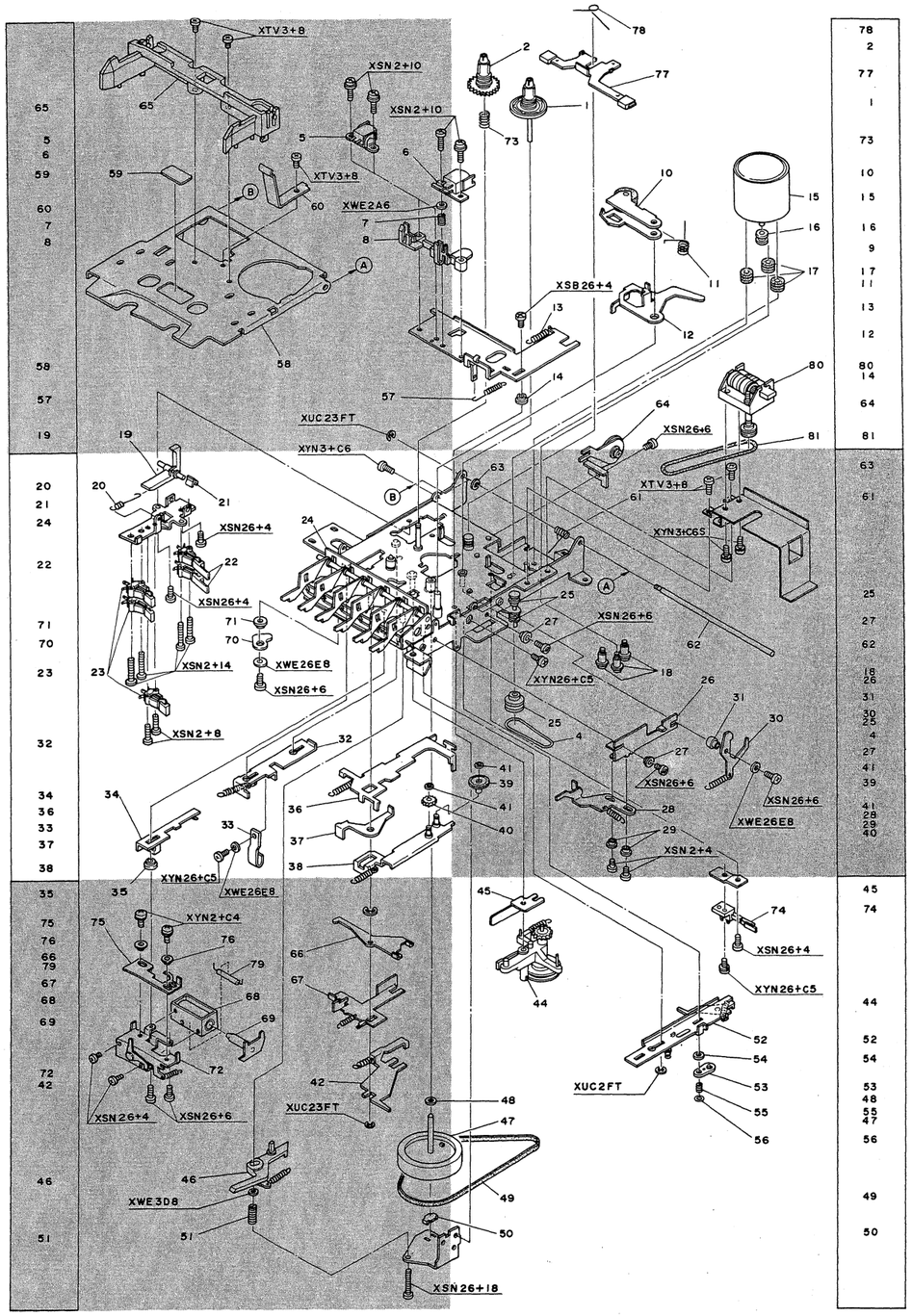


REPLACEMENT PARTS LIST OF RECORD PLAYER (SP521B)

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SJY254	Player Board Assembly	1
2	SJY9640	Holder, Strobo	1
3	SJY234	Arm Rest Assembly	1
4	SBN922-1	Knob, Speed Selector	2
5	SJY3026	Turntable	1
6	SGE263	45 r.p.m. Adaptor	1
7	SJY4032-2	Turntable Mat	1
8	SJY5154	Knob, Skate	1
9	SJY9616-1	Skate Lever	1
10	SJY9636-2	Anti Skate Collar	1
11	SJY9638	Anti Skate Cam	1
12	SJY9688-1	Anti Skate Spring	1
13	SFXW831-5	Washer	2
14	SJY9614	Cut Lever	1
15	SJY9686-1	Spring Stop	1
16	SJY9346	Screw, Cut Plate	1
17	SJY210	Lift Assembly	1
17-1	(SJY9680)	Rubber,Lift	(1)
18	SJY9694	Strobo Cover	1
19	SJY9228	Spring, Lift A	1
20	SJY9532	Spring, Lift B	1
21	SJY5144	Shaft Lift	1
22	SJY256	Lever, Assembly Stop	1
23	SJY258	Lever, Assembly Cueing	1
24	SJY9682	Bracket, Lever	1
25	SJY9676	Shaft B	1
26	SJY208-1	Cylinder Assembly	1
27	SNE468	Washer, Speed	2
28	SJY9670-1	Cueing Arm	1
29	SJY9674	Shaft A	1
30	SJY9696	Holder, Tone Arm Rest	1
31	SJY9222-1	Spring, Tone Arm Rest	1
32	SJY9672	Bracket, Lever	1
33	SJY9624	Lever, Reset	1
34	SJY9064	Spring Rest	1
35	SJY9244	Rubber, Cushion	4
36	SJY9714-1	Spring A	2
37	SJY9716-1	Spring B	2
38	SMN1188	Holder, Variable Resistor	1
39	SJY5162	Spacer, Strobo	2
40	DFX5000	DD Motor Assembly with pulley	1
41	SJY248	Restor Lever Assembly	1
42	SJY238	Base Plate Assembly	1
43	SJY240	Slide Arm Assembly	1
44	SJY242	Gear Mecha Assembly	1
45	AH75503	Micro Switch	1
46	SJY244	Lever Assembly	1
47	SJY9698	T.S Holder	1
48	SJY9700	Trip Lever	1
49	SJY9702	Plate	1
50	SJY9704	Slide Arm Spring	1
51	SJY9610	Steel Ball	1
52	SJY9706	Push Pin	1
53	SJY9708	Reject Arm	1
54	SJY9710	Reject Arm Spring	1
55	EPU622SMBD	Tone Arm Assembly with Cartridge, Stylus and Weight	1
56	EPC270C-X	Cartridge with Stylus	1
57	EPS270SD	Stylus	(1)
58	SJY216-1	Head Shell Assembly with Cartridge, Stylus	1
59	SJY260	Tone Arm without Weight	1
60	SJY218	Balance Weight Assembly	1

Ref. No.	Part No.	Description		Per Set (pcs.)
TRANSISTORS				
Q651	2SC828	Transistor		1
Q652	2SC1317	Transistor		1
DIODES				
D651,652	BR5505S	LED		2
LAMPS				
PL1	XAMR51 × 400	12.6V 50 mA		1
VARIABLE RESISTORS				
VR651,652	EWHG5AF20B53	Speed Adjust 5kΩ B		2
SWITCHES				
S651	SSL52	Speed Selector		1
RESISTORS				
R651	ERD25TJ682	6.8kΩ	1/4W	1
R652	ERD25TJ332	3.3kΩ	1/4W	1
R653	ERD25TJ152	1.5kΩ	1/4W	1
R654	ERD25TJ332	3.3kΩ	1/4W	1
R655	ERD25TJ470	47Ω	1/4W	1
R656 ⚠	ERQ12HJ220	22Ω	1/2W	1
R657 ⚠	ERG1ANJ101	100Ω	1W	1
CAPACITORS				
C651	ECSF35ER22T	0.22μF	35V	1
C652	ECEA1CS221	220μF	16V	1
OTHERS				
1	AD1600	Adhesives		1
2	KF96H300KCS	Silicon Oil		1

EXPLODED VIEW OF CASSETTE TAPE DECK (SJ570)



REPLACEMENT PARTS LIST OF CASSETTE TAPE DECK (SJ570)

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SMQ2476	Take up Reel Assembly	1
2	SMQ2474	Supply Reel Assembly	1
4	SMQ2608	Counter Belt A	1
5	SJH14	E. Head	1
6	SJH30	R/P Head	1
7	SMQ678	Spring, R/P Head	1
8	SMQ1986	Head Base	1
10	SMQ2482	Pinch Roller Assembly	1
11	SMQ2484	Spring, Pinch Roller	1
12	SMQ2494	Arm Lever	1
13	SMQ1898	Spring, Head Panel	1
14	SMQ1648	Collar, Head Panel	1
15	MMC6A2MXA	Motor	1
16	SMQ1802-1	Motor Pulley	1
17	SMQ2584	Rubber Cushion	3
18	SMQ2586	Spacer Screw	3
19	SMQ1232-1	REC Safety Lever	1
20	SMQ2578	Spring, REC Safety Lever	1
21	SMQ1706	Stopper, REC Safety Lever	1
22	SMQ1664	Leaf Switch, Motor ON-OFF	2
23	SMQ2070	Leaf Switch, Muting, FF-Rew	3
24	SMQ2600	Push Button Frame Assembly	1
25	SMQ2436	Drive Pulley	3
26	SMQ2558	Eject Slide Lever	1
27	SMQ1426	Collar, Eject Slide Lever	2
28	SMQ2560	Slide Kick Lever w/Spring	1
29	SMQ2562	Collar, Slide Kick Lever	2
30	SMQ2564	Eject Hook w/Spring	1
31	SMQ2588	Collar, Eject Hook	1
32	SMQ2552	REC Slide Lever w/Spring	1
33	SMQ2598	Spring Plate, REC Switch	1
34	SMQ1920	Play Slide Lever	1
35	SMQ1426	Collar, Play Slide Lever	1
36	SMQ1926	Main Plate w/Spring	1
37	SMQ1928	Rewind Arm	1
38	SMQ1922	FF Idler Arm Assembly w/Spring	1
39	SMQ1450	Take up Idler	1
40	SMQ1924	FF Gear	1
41	SMQ1952	Washer	2
42	SMQ2574	Operation Plate, Muting w/Spring	1
44	SMQ1930	RF Clutch Assembly w/Spring	1
45	SMQ2724	Spring Plate, RF Clutch	1
46	SMQ1918	Auto Stop Kick Lever w/Spring	1
47	SMQ1942	Flywheel	1
48	SMQ1940	Washer	1
49	SMQ2556	Main Belt	1
50	SMQ2538	Flywheel Pad	1
51	SMQ1948	Thrust Spring, Flywheel	1
52	SMQ2568	Pause Slide Lever Ass'y w/Spring	1
53	SMQ2444	Pause Lever	1
54	SMQ2446	Collar, Pause Lever	1
55	SMQ2448	Spring, Pause Lever	1
56	SMQ2450	Washer	1

Ref. No.	Part No.	Description	Per Set (pcs.)
57	SMQ2488	RC Spring	1
58	SMQ2404	Cassette Cover	1
59	SDH94-2	Fluorescent Paper	1
60	SMQ2412-1	Cassette Hold Spring	1
61	SMQ2408	Spring, Cassette Cover	1
62	SMQ2406	Shaft	1
63	SMQ2410	Collar	1
64	SXE158	Eject Arm Assembly	1
65	SGE1060	Cassette Holder	1
66	SMQ2500	RC Lever	1
67	SMQ2602	RF Slide Lever W/Spring	1
68	SMQ2604	Solenoid Assembly	1
69	SMQ2606	Shaft Assembly	1
70	SMQ2504	Stopper	1
72	SMQ2616	Collar, Stopper	1
72	SMQ2610	Bracket, Solenoid	1
73	SMQ2512	Spring, Supply Reel	1
74	SMQ2692	Pause Switch	1
75	SMQ2632	Operation Plate, Auto Stop	1
76	SMQ2634	Collar, Auto Stop Operation Plate	2
77	SMQ2718	Brake Arm	1
78	SMQ2720	Spring, Brake Arm	1
79	SM112	Diode	1
80	SMQ2532	Tape Counter	1
81	SMQ2402	Counter Belt B	1

CIRCUIT BOARD AND WIRING CON

IC101															
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	0V	2.5V	10.2V	7.2V	7.4V	7.5V	9.0V	7.6V	7.5V	11.8V	0.8V	0.1V	4.8V	5.5V	0.4V	1.5V

IC801,802																
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	5.8V	6.2V	6.6V	6.1V	6.1V	6.3V	6.2V	—	0V	6. V	6.6V	6.3V	6.3V	6.3V	6.2V	12.5V

IC701																
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	-0.1V	-0.1V	0V	-1.4V	-25.8V	0V	0V	24.8V	25.8V	0V	0V	-25.8V	-1.4V	0V	-0.1V	-0.1V

IC601,602							
PIN NO	1	2	3	4	5	6	7
	2 V	0.6V	0.04V	0V	0.6V	11.5V	30.6V

IC901	
1	24.3V
2	14.9V
3	0V

IC902	
1	24.0V
2	15.1V
3	0V

IC903	
1	15.5V
2	9.6V
3	1.2V

Q203	OFF	ON
C	14.5	4.5V
B	0.5V	0.6V
E	0V	

Q204	OFF	ON
C	0V	
B	14.5	4.5V
E	13.5	5.1V

Q851	
C	0V
B	0.6V
E	0V

Q852	
C	0V
B	0.6V
E	0V

Q801	
C	11.6V
B	1.6V
E	1.3V

Q401,402	
C	1.2V
B	0.6V
E	0V

Q802	
C	11.1V
B	1.3V
E	0.6V

Q403,404	
C	6.4V
B	1.2V
E	0.6V

Q803,804	
C	0V
B	0V
E	0V

Q405,406	
C	9.1V
B	3.2V
E	2.6V

Q805,806	
C	0V
B	0V
E	0V

Q807	
C	0V
B	0V
E	0V

Q808	
C	0V
B	0.7V
E	0V

Q409,410	
C	6.0V
B	5.1V
E	4.4V

Q411,412	
C	18.0V
B	2.0V
E	1.4 V

IC201		
PIN NO	FM	AM
1	0V	0V
2	0V	0V
3	0V	0V
4	3.1V	3.1V
5	0V	1.0V
6	0V	0V
7	0.9V	0.9V
8	5.5V	5.5V
9	9.2V	9.2V
10	1.5V	1.5V
11	0.8V	0.8V
12	9.2V	9.2V
13	0.7V	0.7V
14	1.5V	1.5V
15	9.2V	9.2V
16	0.7V	0.7V

IC202		
PIN NO	FM	AM
1	2.1V	2.8V
2	2.1V	3.6V
3	2.1V	2.8V
4	0V	0V
5	1.4V	1.0V
6	5.9V	6.3V
7	5.1V	5.5V
8	5.7V	5.7V
9	5.7V	5.7V
10	5.7V	5.7V
11	11.4V	12.0V
12	2.2V	7.6V
13	2.1V	0V
14	0V	0V
15	8.0V	5.2V
16	0V	0V

IC301		
PIN NO	FM	AM
1	11.0V	10.8V
2	2.3V	2.3V
3	5.3V	5.3V
4	8.9V	8.6V
5	8.9V	8.7V
6	4.4V	4.1V
7	4.0V	3.9V
8	0V	0V
9	14.1V	13.5V
10	2.2V	2.3V
11	2.2V	2.3V
12	2.3V	2.3V
13	2.3V	2.3V
14	2.3V	2.3V
15	3.5V	0V
16	0V	8.1V

Q853	
C	0V
B	0V
E	0V

Q854,855	
C	0V
B	0V
E	0V

Q856	
C	0V
B	0.7V
E	0V

Q857	
C	3.6V
B	0V
E	0V

Q201	
C	15.0V
B	7.5V
E	6.8V

ANT

TO POWER CORD

S901 POWER SWITCH

S1 POWER VOLTAGE SELECTOR SWITCH

PRIMARY

SECONDARY

POWER TRANSFORMER

FM RF TUNER

SP. J

SW30JB-10

SW6UJB-15

SW6UJB-7

SW6UJB-12

SW6UJB-11

S101 ~ S107 PRESET SELECTOR SWITCH

SF1 ~ SF7 FUNCTION SELECTOR SWITCH

VR504,505 TREBLE CONTROL

VR506,507 BASS CONTROL

VR503 BALANCE CONTROL

VR501,502 VOLUME CONTROL

* This diagram might be modified without notice for further development of technology.

WIRING CONNECTION

Q04		Q405,406		Q807		Q409,410		Q021		Q023		Q025		Q811		Q813		Q810	
V	C	9.1V	C	0V	C	6.0V	C	4.9V	C	0V	C	2.1V	C	0.2V	C	12.2V	C	12.2V
V	B	3.2V	B	0V	B	5.1V	B	0.6V	B	0.6V	B	2.7V	B	0.8V	B	0V	B	3.4V
V	E	2.6V	E	0V	E	4.4V	E	0V	E	0V	E	2.1V	E	0V	E	0V	E	12.1V
Q04		Q805,806		Q808		Q411,412		Q022		Q024		Q026		Q812		Q809		Q902	
V	C	0V	C	0V	C	18.0V	C	12.5V	C	7.6V	C	12.5V	C	12.2V	C	12.0V	C	39.5V
V	B	0V	B	0.7V	B	2.0V	B	4.9V	B	0V	B	11.7V	B	0.2V	B	0V	B	31.5V
V	E	0V	E	0V	E	1.4V	E	4.3V	E	0V	E	12.4V	E	0V	E	3.4V	E	31.1V

To P25- K

P20

P21

P18

To P20-MC18

To S7

TAPE COUNTER

To S8- 3

To S8- 1

To S8- 2

To P12- MC10

MC10

S2 TAPE MOTOR SWITCH

S3 TAPE PLAYBACK SWITCH

PLUNGER

S4 TAPE FF / REW SWITCH

S5 PAUSE SWITCH

CASSETTE MOTOR

S8 FF / REW SWITCH

To P18- 16

To P18- 17

To P18- 18

S7

To P18- 15

To P9 - MC13

To P19- MC16

P19

SW6UJB-7 SW4UJB-7 SW4UJB-7 SW6UJB-7

P22

IMC12

P26

FL METER

P12

P14

S802 WHISTLE DEFEAT SWITCH

P17

S803 VU / PEAK SWITCH

ERASE HEAD

To P12- MC9

R/P HEAD

To P12- MC8

P15 P16

MIC JACK

VR403 VR404 REC LEVEL CONTROL

ST1 ~ ST14 REC / PLAY SELECTOR SWITCH

P13

S404 REC MUTE SWITCH

P23

P3

DIN R/P

P6

S502 TAPE MONITOR SWITCH

S501 LOUDNESS SWITCH

P25

S701 SPEAKER B SWITCH

S702 SPEAKER A SWITCH

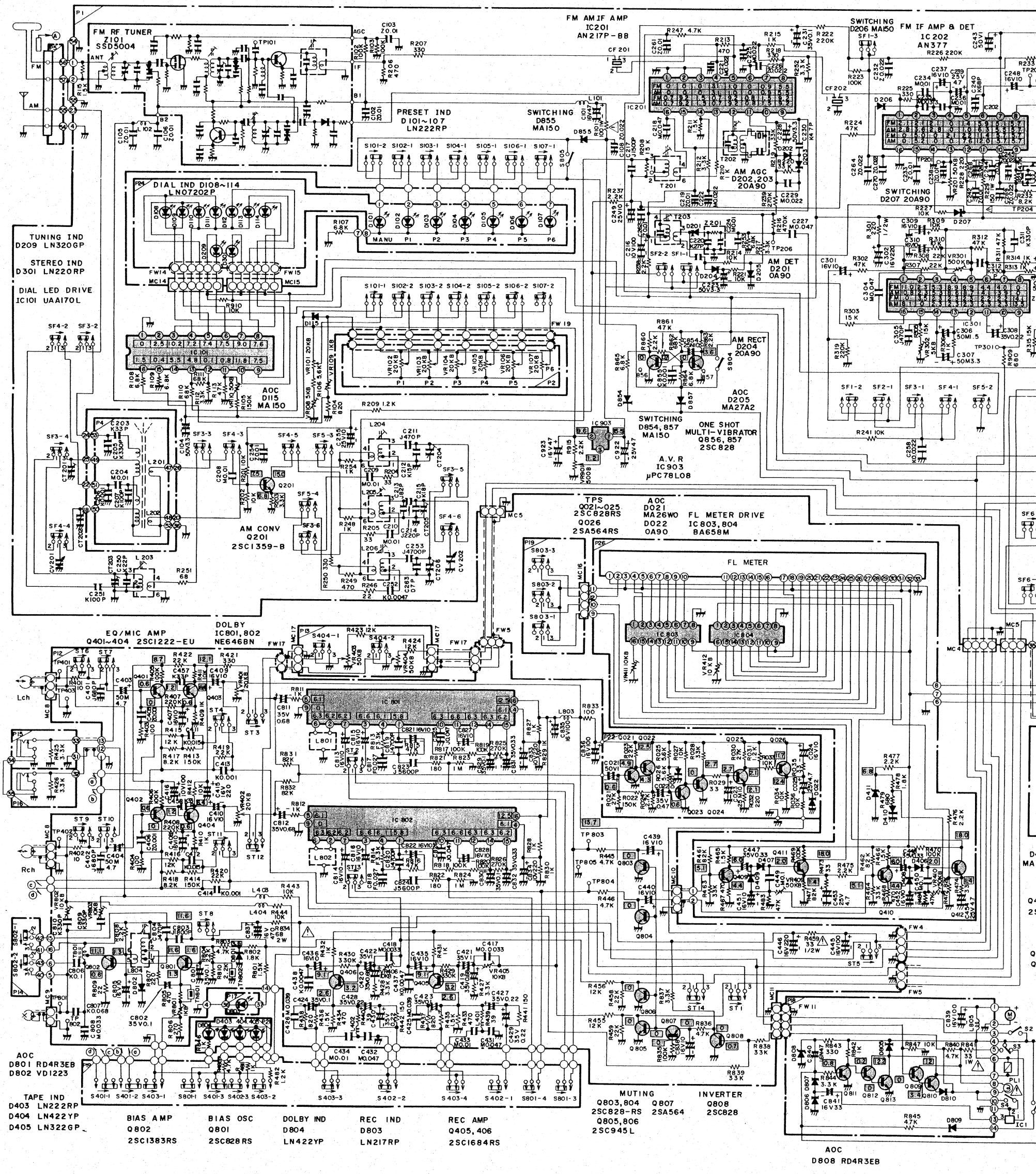
P11

PHONES

MODEL NO. SG-5000

SG-5000

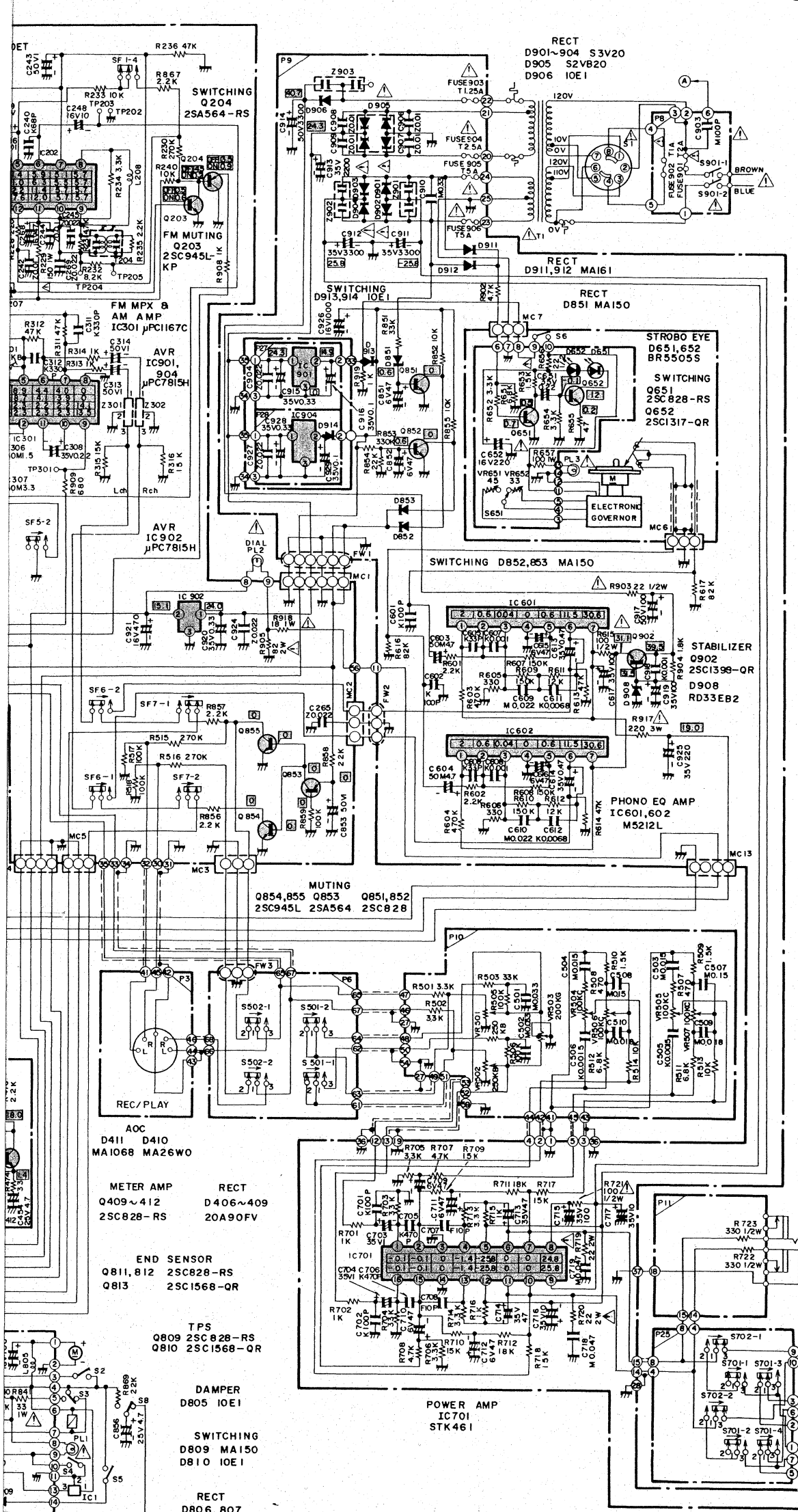
SCHEMATIC DIAGRAM (FOR THE UNITED KINGDOM)

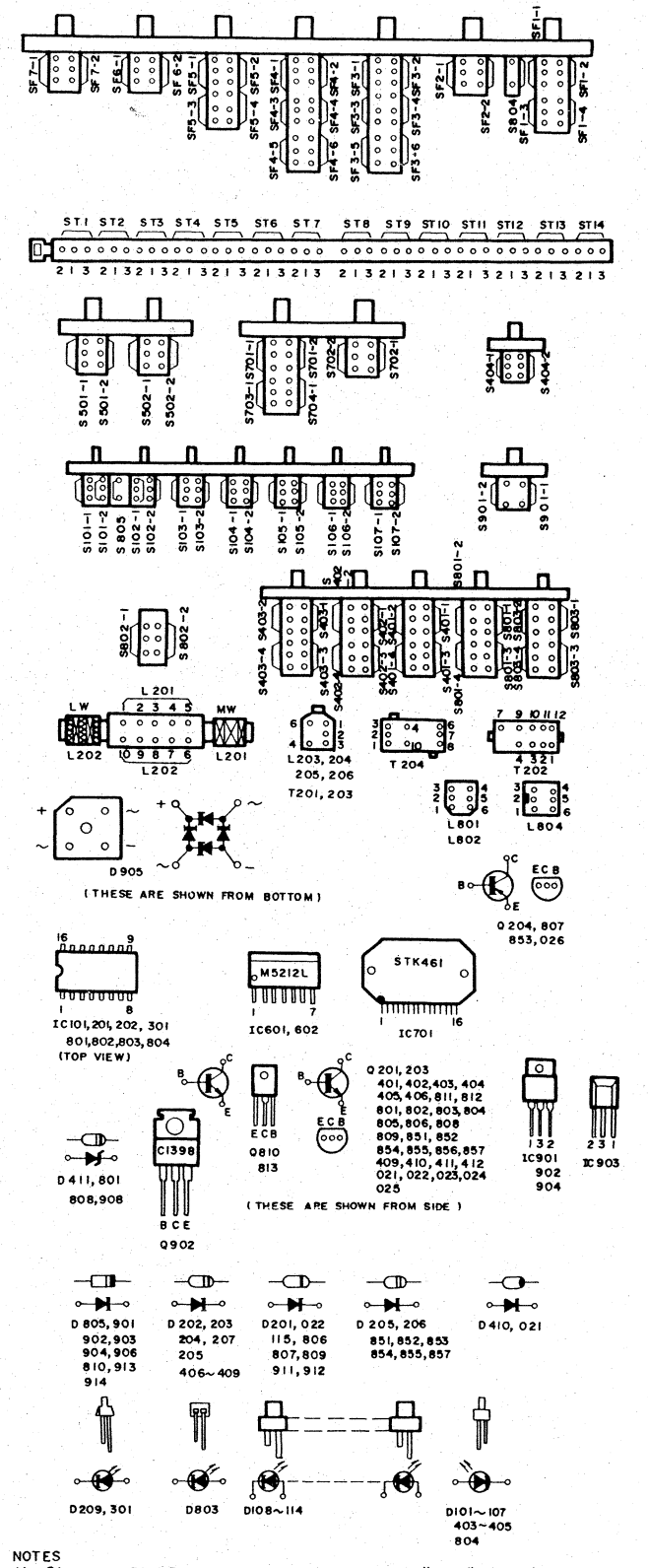


R	115 108 109 251 110 111 910 105 201 203 106 104 107 102 103 206 207 915 101 237 208 861 247 211 213 214 253 215 220 252 222 319 223 301 225 226 306 228 229 311 231 233 112 113 202 250 254 209 204 248 205 246 249 424 821 817 823 819 825 827 422 411 255 421 802 801 831 811 832 812 432 423 813 424 815 822 818 824 820 826 829 425 401 809 808 403 405 407 409 419 834 442 816 431 429 433 427 828 426 402 404 406 415 413 804 420 481 807 417 412 810 803 443 438 434 440 814 428 437 435 439 441 830 805 408 410 846 482 444 436 430 418 480
C	251 205 203 105 106 104 208 254 255 102 103 211 212 923 101 108 217 262 261 219 221 225 226 228 231 301 264 232 305 234 237 239 240 243 245 248 206 204 209 210 214 215 249 216 218 220 222 224 229 230 270 233 235 236 268 244 269 207 416 457 411 252 213 263 922 855 854 223 227 302 309 238 242 308 311 250 405 804 407 412 409 022 023 447 024 453 445 304 310 306 312 810 401 403 809 406 805 458 801 413 436 815 813 817 253 821 827 829 831 833 835 836 021 439 449 446 025 841 806 402 404 802 408 415 837 811 438 816 814 818 819 822 825 828 830 832 834 440 838 451 840 807 808 805 803 410 812 424 434 422 418 820 824 826 421 417 429 414 426 428 420 823 435 423 419 427 448 452 258 307 454 430 432 437 425 433 431 450 839
L	102 201 804 202 203 403 404 801 802 402 204 205 206 401 803 101 805
T	801 201 203 202 204
SW	SF4-2 SF3-2 ST6 ST7 SF3-3 SF4-3 ST4 ST3 SF4-5 SF5-3 ST2 S101-2 S102-1 S103-1 S104-1 S105-1 S106-1 S107-1 S107-2 S805 SF2-2 SF1-1 S804 SF1-2 SF1-3 SF3-1 SF4-1 SF5-2 SF6-2 S802-1 SF3-4 ST9 ST10 ST8 ST11 ST12 SF5-4 ST13 S101-1 S102-2 S103-2 S104-2 S105-2 S106-2 S803-3 SF2-1 SF6-1 S802-2 SF4-4 S401-1 S401-2 S403-1 S801-1 S401-3 S402-3 S403-2 SF3-6 S404-1 S404-2 S403-3 S402-2 S403-4 SF3-5 SF4-6 S402-1 S801-4 S803-2 ST14 ST1 S2 S803-1 ST5 S3 S801-3 S4 S5

* This diagram might be modified without notice for further development of technology.

(GDOM) SERIAL NO. 94050-001001 TO 97050-003520





NOTES

1) S1 : POWER VOLTAGE SELECTOR SWITCH IN "220V" POSITION
S2 : TAPE MOTOR SWITCH IN "OFF" POSITION
S3 : TAPE PLAYBACK SWITCH IN "OFF" POSITION
S4 : TAPE FF/REW SWITCH IN "OFF" POSITION
S5 : TAPE PAUSE SWITCH IN "OFF" POSITION
S6 : PHONO MOTOR SWITCH IN "OFF" POSITION

S8 : TAPE FF/REW SWITCH IN "OFF" POSITION
S101~107 : PRE SET SELECTOR SWITCH IN "MANUAL" POSITION
SF1~SF7 : FUNCTION SELECTOR SWITCH IN "TAPE" POSITION (SF1:FM AUTO SF2:FM MONO SF3:MW SF4:LW SF5:SW SF6:PHONO SF7:TAPE)
ST1~ST14 : REC/PLAY SELECTOR SWITCH IN "PLAY" POSITION
S401~403 : TAPE SELECTOR SWITCH IN "NORMAL" POSITION (S401:NORMAL S402:Fe-Cr S403:CrO2)
S404 : RECORDING MUTE SWITCH IN "OFF" POSITION
S501 : LOUDNES SWITCH IN "OFF" POSITION
S502 : TAPE MONITOR SWITCH IN "SOURCE" POSITION
S651 : SPEED SELECTOR SWITCH IN "33rpm" POSITION
S801 : DOLBY NR SWITCH IN "OUT" POSITION
S802 : WHISTLE DEFEAT SWITCH IN "A" POSITION
S803 : VU/PEAK CHANGE-OVER SWITCH IN "VU" POSITION
S804 : FUNCTION MUTING SWITCH IN "OFF" POSITION
S805 : PRE SET MUTING SWITCH IN "OFF" POSITION
S901 : POWER SWITCH IN "OFF" POSITION
S701,702 : SPEAKER SELECT SWITCH IN "B" POSITION

2) Letters Z.M.K.J & F indicate folerance of Capacitors as follows
Z= +80% -20% M=±20% K=±10% J=±5% F=±1%

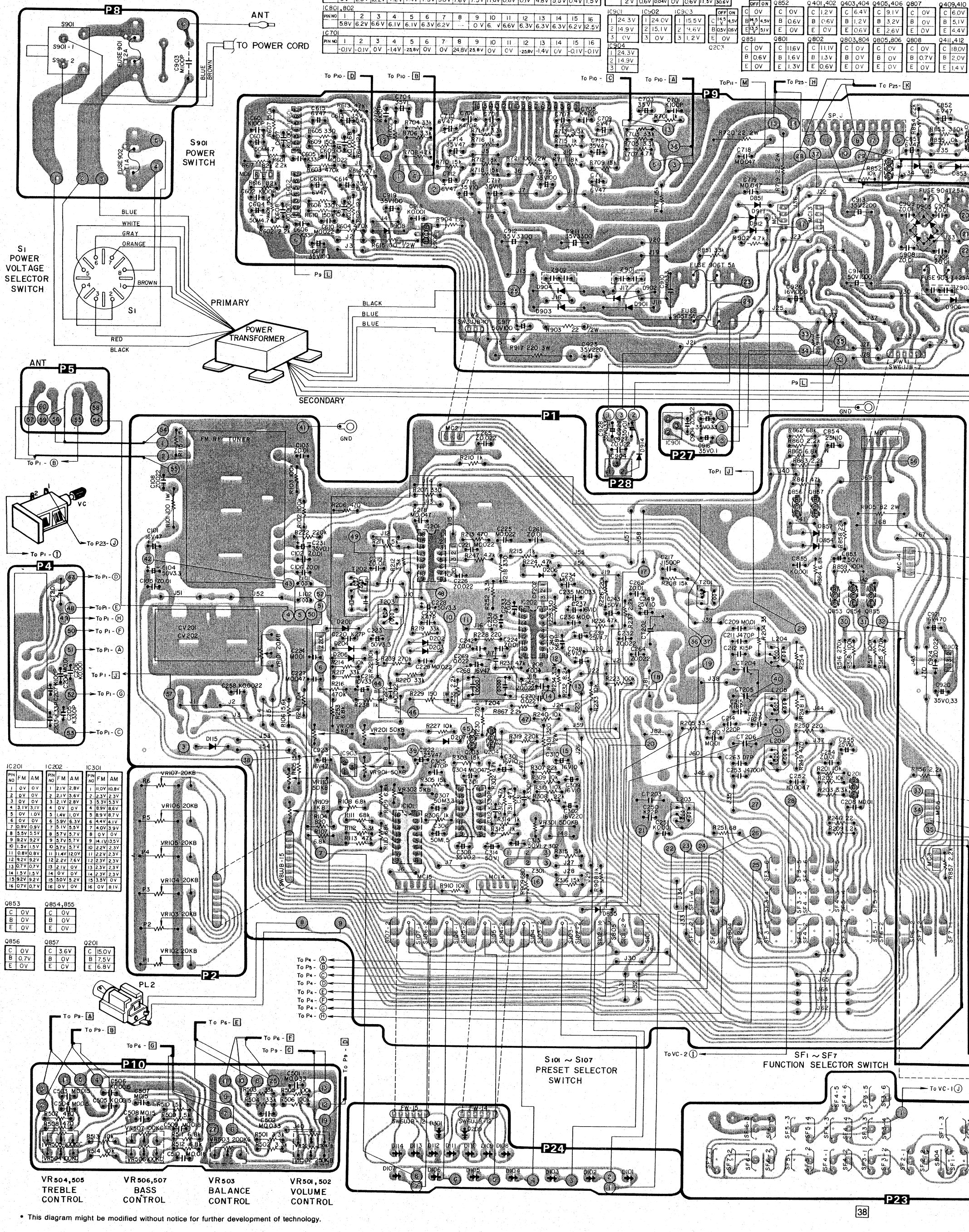
3) DC Voltages are to be measured with VTVM under no signal condition in "AM" "FM" position

IMPORTANT SAFETY NOTICE

THE ⚠ MARK ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY.
WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS MARKED ⚠ IN THE SCHEMATIC.

| | | |

CIRCUIT BOARD AND WIRING CONNECTION (FOR THE UNITED KINGD



IC101																
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	0V	2.5V	10.2V	7.2V	7.4V	7.5V	9.0V	7.6V	7.5V	11.8V	0.8V	0.1V	4.8V	5.5V	0.4V	1.5V

IC801,802																
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	5.8V	6.2V	6.6V	6.1V	6.1V	6.3V	6.2V	-	0V	6.6V	6.6V	6.3V	6.3V	6.3V	6.2V	12.5V

IC701																
PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	-0.1V	-0.1V	0V	-1.4V	-25.8V	0V	0V	24.8V	25.8V	0V	0V	-25.8V	-1.4V	0V	-0.1V	-0.1V

IC601,602							
PIN NO	1	2	3	4	5	6	7
	2V	0.6V	0.04V	0V	0.6V	11.5V	30.6V

IC901	
1	24.3V
2	14.9V
3	0V

IC902	
1	24.0V
2	15.1V
3	0V

IC903	
1	15.5V
2	9.6V
3	1.2V

Q203	OFF	ON
C	0V	14.5V / 4.5V
B	0.5V	0.6V
E	0V	

IC904	
1	24.3V
2	14.9V
3	0V

Q204	OFF	ON
C	0V	
B	14.5V	4.5V
E	13.5V	5.1V

Q851	
C	0V
B	0.6V
E	0V

Q852	
C	0V
B	0.6V
E	0V

Q801	
C	11.6V
B	1.6V
E	1.3V

Q401,402		
C	1.2V	11.1V
B	0.6V	1.3V
E	0V	0.6V

Q802		
C	11.1V	0V
B	1.3V	0V
E	0.6V	0V

Q403,404		
C	6.4V	0V
B	1.2V	0V
E	0.6V	0V

Q803,804		
C	0V	0V
B	0V	0V
E	0V	0V

Q405,406		
C	9.1V	0V
B	3.2V	0V
E	2.6V	0V

Q805,806		
C	0V	0V
B	0V	0V
E	0V	0V

Q807		
C	0V	0V
B	0V	0V
E	0V	0V

Q808		
C	0V	0V
B	0.7V	0V
E	0V	0V

Q409,410		
C	6.0V	0V
B	5.1V	0V
E	4.4V	0V

Q411,412		
C	18.0V	0V
B	2.0V	0V
E	1.4V	0V

IC201		
PIN NO	FM	AM
1	0V	0V
2	0V	0V
3	0V	0V
4	3.1V	3.1V
5	0V	1.0V
6	0V	0V
7	0.9V	0.9V
8	5.5V	5.5V
9	9.2V	9.2V
10	1.5V	1.5V
11	0.8V	0.8V
12	9.2V	9.2V
13	0.7V	0.7V
14	1.5V	1.5V
15	9.2V	9.2V
16	0.7V	0.7V

IC202		
PIN NO	FM	AM
1	2.1V	2.8V
2	2.1V	3.6V
3	2.1V	2.8V
4	0V	0V
5	1.4V	1.0V
6	5.9V	6.3V
7	5.1V	5.5V
8	5.7V	5.7V
9	5.7V	5.7V
10	5.7V	5.7V
11	11.4V	12.0V
12	2.2V	7.6V
13	2.1V	0V
14	0V	0V
15	3.0V	5.2V
16	0V	0V

IC301		
PIN NO	FM	AM
1	11.0V	10.8V
2	2.3V	2.3V
3	5.3V	5.3V
4	8.9V	8.6V
5	8.9V	8.7V
6	4.4V	4.1V
7	4.0V	3.9V
8	0V	0V
9	14.1V	13.5V
10	2.2V	2.3V
11	2.2V	2.3V
12	2.3V	2.3V
13	2.3V	2.3V
14	2.3V	2.3V
15	3.5V	0V
16	0V	8.1V

Q853	
C	0V
B	0V
E	0V

Q854,855	
C	0V
B	0V
E	0V

Q856	
C	0V
B	0.7V
E	0V

Q857	
C	3.6V
B	0V
E	0V

Q201	
C	15.0V
B	7.5V
E	6.8V

* This diagram might be modified without notice for further development of technology.

D KINGDOM) SERIAL NO. 94050-001001 TO 97050-003520

Q406		Q807		Q409,410		Q021		Q023		Q025		Q811		Q813		Q810	
1V	C	0V	C	6,0V	C	4,9V	C	0V	C	2,1V	C	0,2V	C	12,2V	C	12,2V
2V	B	0V	B	5,1V	B	0,6V	B	0,6V	B	2,7V	B	0,8V	B	0V	B	3,4V
6V	E	0V	E	4,4V	E	0V	E	0V	E	2,1V	E	0V	E	0V	E	12,1V

806		Q808		Q411,412		Q022		Q024		Q026		Q812		Q809		Q902	
0V	C	0V	C	18,0V	C	12,5V	C	7,6V	C	12,5V	C	12,2V	C	12,0V	C	39,5V
0V	B	0,7V	B	2,0V	B	4,9V	B	0V	B	11,7V	B	0,2V	B	0V	B	31,5V
0V	E	0V	E	1,4 V	E	4,3V	E	0V	E	12,4V	E	0V	E	3,4V	E	31,1V

P25- K

P18 P21 P20 P19 P22 P26 P12 P14 P17 P13 P6 P25 P11 P15 P16 P3 P23

TAPE COUNTER

S2 TAPE MOTOR SWITCH

S3 TAPE PLAYBACK SWITCH

C856 4.7

R869 22k

HOLDER

PLUNGER

S4 TAPE FF / REW SWITCH

S8 FF / REW SWITCH

To P18- A

S5 POUSE SWITCH

CASSETTE MOTOR

To P9 - MC13

To P19- MC16

EL METER

S802 WHISTLE DEFEAT SWITCH

S803 VU / PEAK SWITCH

ERASE HEAD

To P12- MC9

R/P HEAD

To P12- MC8

MIC JACK

VR403 VR404 REC LEVEL CONTROL

ST1 ~ ST14 REC / PLAY SELECTOR SWITCH

To VC-1 J

DIN R/P

S502 TAPE MONITOR SWITCH

S501 LOUDNESS SWITCH

S701 SPEAKER B SWITCH

S702 SPEAKER A SWITCH

PHONES

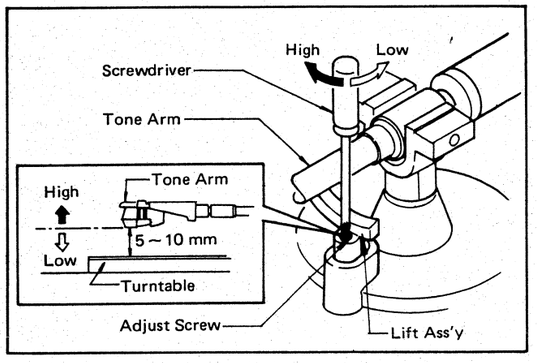
S404 REC MUTE SWITCH

MODEL NO. SG-5000/UK

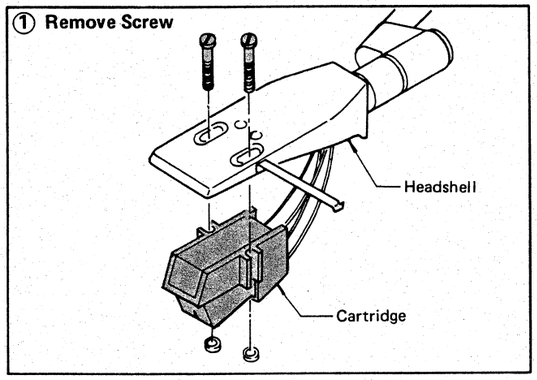
SG-5000

SERVICING THE RECORD PLAYER–1

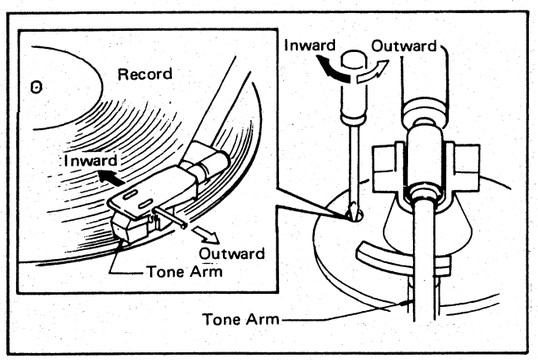
■ **Tone Arm Height Adjustment**
Push down to lift ass'y and turn adjust screw.

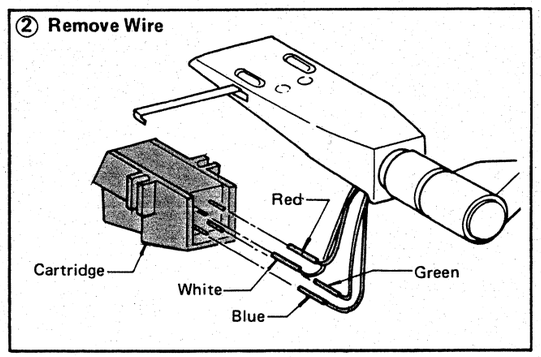


■ **Cartridge Replacement**

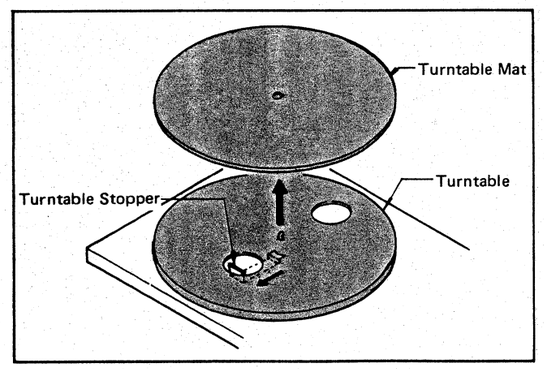


■ **Tone Arm Automatic Start Adjustment**
Turn adjust screw.

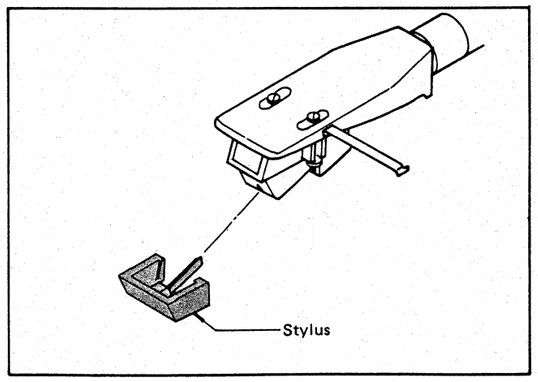




■ **Remove Turntable**
1. Remove Turntable Mat
2. Pull Turntable Stopper

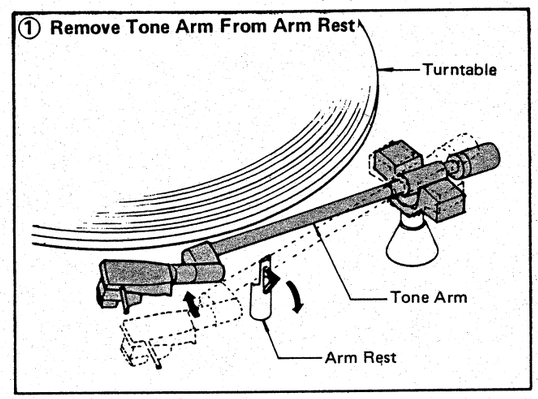


■ **Stylus Replacement**

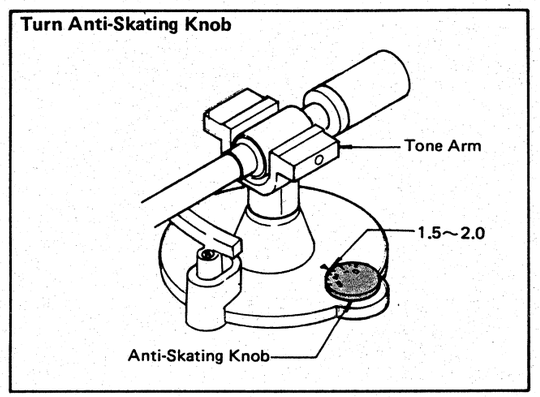


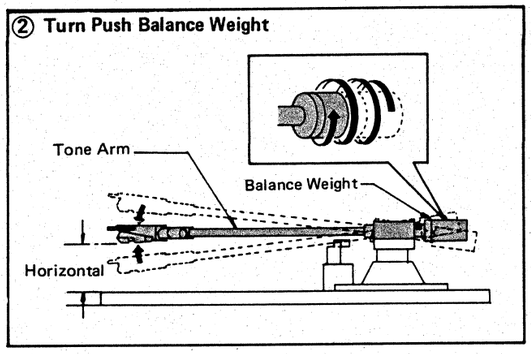
SERVICING THE RECORD PLAYER–2

■ **Horizontal Balance Adjustment**

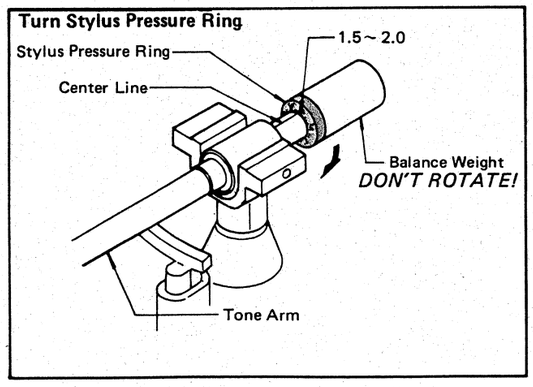


■ **Tone Arm Automatic Return Adjustment**
1. Remove turntable mat.
2. Turn adjust screw.





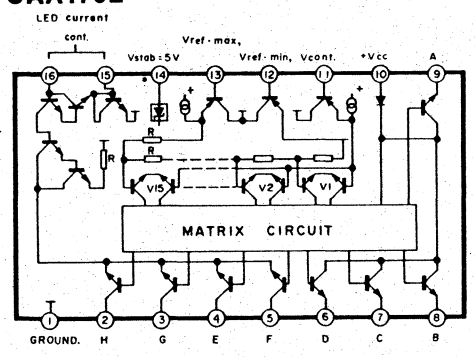
■ **Stylus Pressure Adjustment**
1. Adjust horizontal balance.
2. Correct stylus pressure valve to center line.



IC BLOCK DIAGRAMS

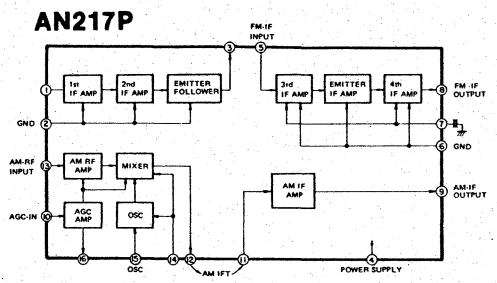
IC101

UAA170L



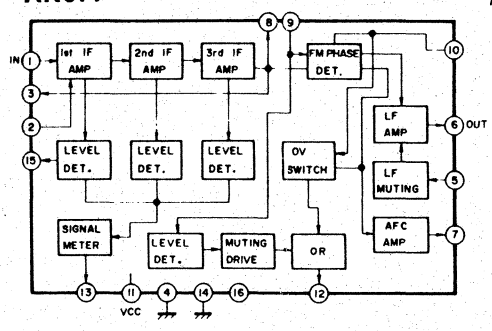
IC201

AN217P



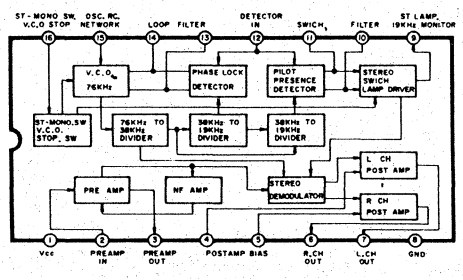
IC202

AN377



IC301

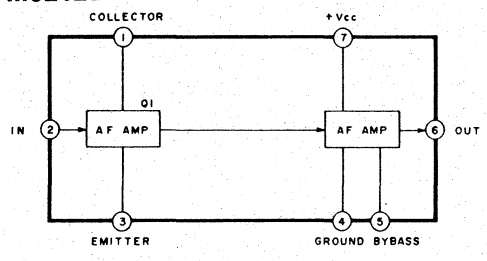
μPC1161C



41

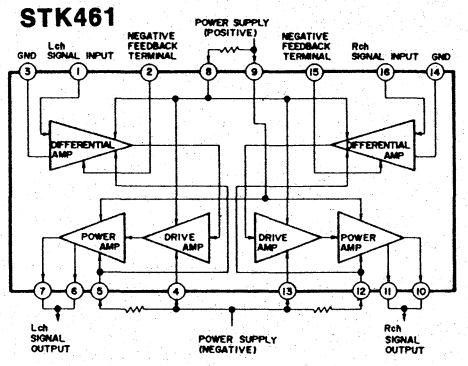
IC601,602

M5212L



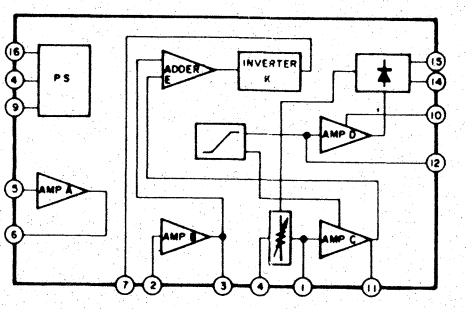
IC701

STK461



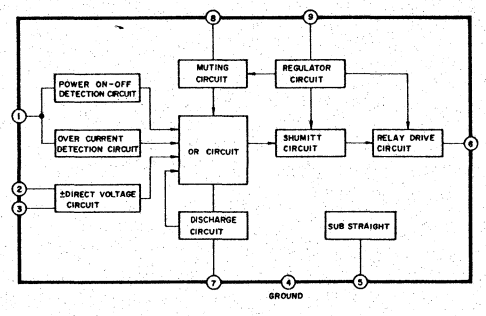
IC801,802

NE646BN



IC803, 804

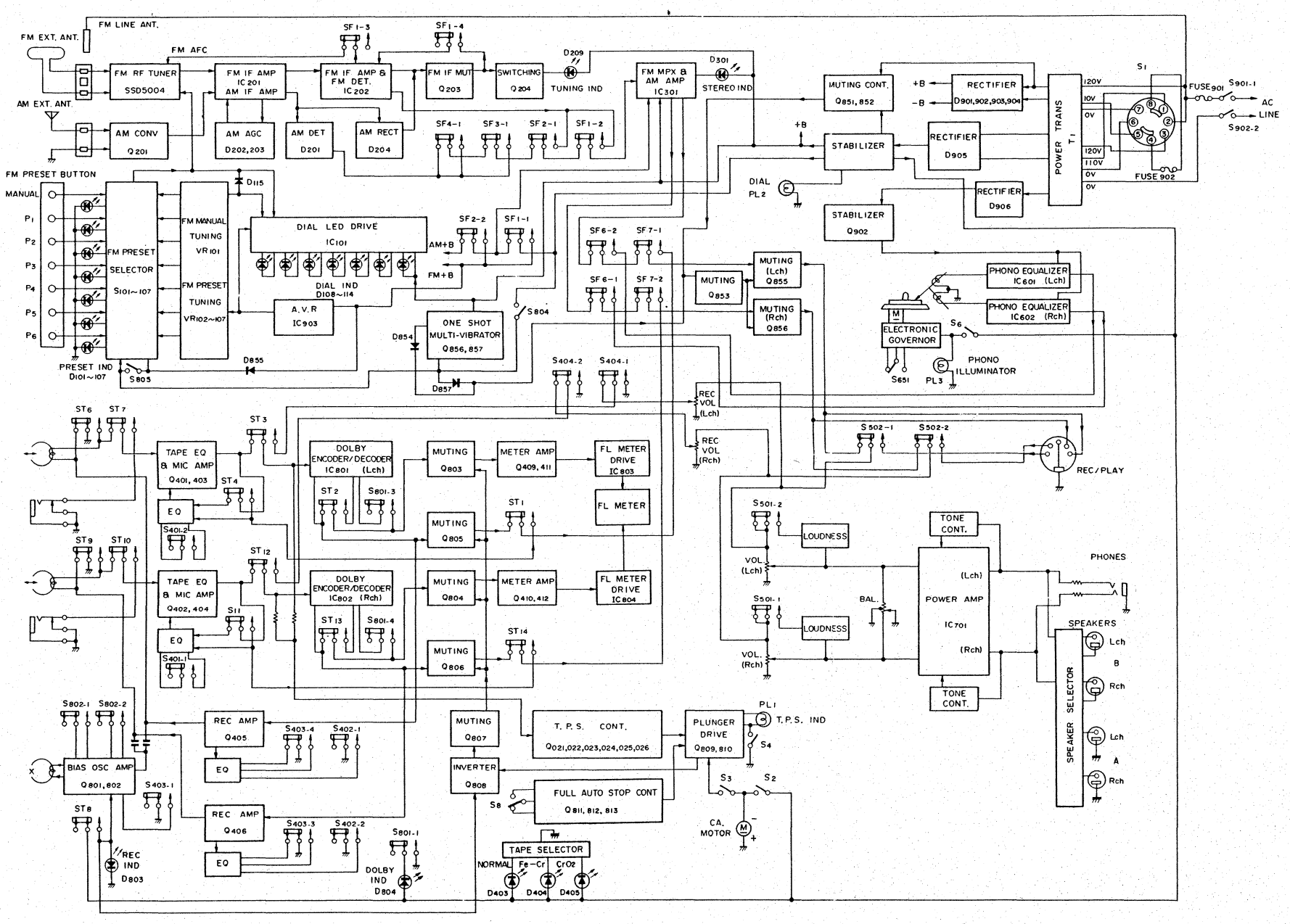
BA658



SG-5000

SG-5000

BLOCK DIAGRAM



BLOCK DIAGRAM MODEL SG-5000

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